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Educational News and Editorial Comment

AIDING HIGH-SCHOOL PUPILS UNDER THE YOUTH ADMINISTRATION

The executive director of the National Youth Administration, Aubrey Williams, has issued certain statements, available at this writing, of procedure for distributing "high-school student aid." The statements, made to state youth directors, indicate that funds have been made available "for a program of financial assistance for single young men and women between the ages of sixteen and twenty-five who are at present unable to attend school for want of money for textbooks, carfare, lunch, and other essentials" for the duration of the school year between September 1, 1935, and June 30, 1936. It is planned to extend the aid to approximately two hundred thousand boys and girls. Following are certain of the stipulations governing the program of school aid.

1. All institutions which do not require the equivalent of a high-school graduation for entrance shall be included within this program, provided they are organized and operated as institutions which are non-profit making in character. In case of question, the state director of the National Youth Administration with the aid or advice of the state department of education shall determine which institutions are eligible, and, in cases of necessity, shall secure the opinion of the state attorney general. Such decisions will be subject to review in case of

dispute, by the Education Division of the Federal Works Progress Administration.

2. The number of students who shall be given aid shall be 7 per cent of the number of persons between the ages of sixteen and twenty-five on relief as of May, 1935, as determined by the Federal Works Progress Administration. Only students who are certified as members of relief families shall be eligible to receive aid.

3. The assistance to any individual student shall be not more than six dollars per calendar month.

4. The allotment of funds to be made to each state will be six dollars per month for each of 7 per cent of the number of persons between the ages of sixteen and twenty-five on relief in May, 1935, as determined by the Federal Works Progress Administration.

(*a*) The state youth director shall be responsible for allocating this assistance to the public-school superintendent in each county, city, township, or independent school district of the state on the basis of the number of persons between the ages of sixteen and twenty-five on relief in May, 1935, in each of the several school districts.

(*b*) The public-school superintendent in each county, city, township, or independent school district will be responsible for the selection of students to receive benefit from those between the ages of sixteen and twenty-five, members of relief families, who may wish to attend any of the several schools, both public and private, within the local school district. If this school officer so desires he may select a representative committee of citizens to assist him in selecting from among the persons between the ages of sixteen and twenty-five on relief, those who shall receive aid. Each young person selected to receive assistance shall be free to attend any public or private school, of his own choice.

(*c*) Relief authorities within each local political subdivision shall, upon the request of educational authorities, certify the relief status as of May, 1935, of unemployed young people who are applying to the schools for this assistance.

(*d*) The number of young men and women of any racial group given assistance shall not represent a smaller proportion of the total number aided than the proportion this racial group represents to the total population of the school district.

5. The principal of each school desiring to participate in this program of assistance to school students shall submit to the public-school superintendent of the city, county, township, or independent school district within which the school is located an affidavit which shall carry the indorsement of the principal of the high school or his superior officer. . . . .

6. Aid made available shall be used to assist students from relief families either for:

(*a*) Doing socially desirable work, not including those tasks which have in the past been commonly performed by students as a part of their responsibility as citizens and as members of the student personnel of the institution. Students

may be assigned to perform clerical work, library work, and the checking of student exercises, problems, and papers, etc. Each principal shall pass on the acceptability of the work assigned to students and will be responsible for assuring that the character of the work performed be satisfactory and under proper supervision.

(*b*) Maintaining excellence in the full-time performance of their school studies, in the case of individual students who are especially well qualified or for whom the assignment of work is impracticable.

7. Inasmuch as the principal objective of granting this assistance to school students of relief families is to make possible the continuation in school of young men and women whose education has been interrupted, this aid shall not be used to replace funds heretofore available for aid to the students in the school applying for participation in this program.

8. Ordinary maintenance and janitorial work about the school, and other routine activities that would have to be carried on anyway, shall be financed from the usual sources and not from aid under the National Youth Administration. However, this does not prohibit the employment of additional students on similar types of jobs, where such assignments would be supplementary to the normal use of personnel for such functions. Violation of the spirit of this provision shall be considered a cause for withdrawing the school's allotment of student aid and assigning it to other institutions.

9. The persons between the ages of sixteen and twenty-five from relief families shall be selected for assistance in continuing in school on the following considerations:

(*a*) *Need.*—The student's financial status as a member of a relief family shall be certified to the public-school superintendent of each city, county, township, or independent school district by local relief authorities. Relief authorities in each city, county, township, or independent school district shall certify to educational authorities within that school district the relief status as of May, 1935, of all young people between the ages of sixteen and twenty-five who make application to the schools for this assistance.

(*b*) *Character and ability to do school work.*—The student shall be of good character and, judged by the usual methods of determining ability employed by the particular school, shall possess such ability as to give assurance each will do high-grade work in school.

(*c*) *Status of attendance.*—Only students carrying three-fourths of a student program of courses shall be eligible to participate in this program.

(*d*) *Method of selection.*—In view of the limited number which can be aided by this program among the young men and women whose education has been interrupted by the depressed economic conditions of the past five years, a heavy responsibility is placed upon the school officials to insure the selection of those students most deserving of assistance by this program. In discharging this responsibility, the public-school superintendent shall confer with the local social worker who is familiar with the families from which qualified students will be

chosen. If the school officer elects to select a committee which will aid him in the selection of qualified students from among those applying for assistance, a representative of the local relief authorities shall be included on this committee.

10. The hourly rate of pay for those students who are granted assistance in return for work that they perform shall be such as is commonly paid by the institutions for the type of service rendered. No student shall work more than ten hours in any week, or three hours in any day.

11. The assistance granted to qualified students in return for the excellence of the performance of their full-time school studies shall be made available in amounts determined by the student's individual need as indicated on the application submitted after review.

12. Individual students participating in this program will be paid direct by check, based on detailed pay-roll submitted to the state youth director by the public-school superintendents of the several school districts within the state.....

In commenting on the National Youth Administration, the September *School Review* warned against the dangers of federal control lurking in the provisions that appear to ignore the regularly constituted state and local educational agencies. It is only fair to admit here that the administrative procedure outlined places reliance on local school administrators and, to this extent at least, sets aside the warning. Also, at certain steps in the procedure the state director is required to seek the aid and advice of the state department of education. However, advice is not control, and it is well for all to be on guard against the building-up and the perpetuation of direct relations of administration and control between the federal government and the local schools. On the positive side it is apparent that the plan of student aid gives promise of being helpful in extending the opportunities of education for large numbers of youth at the high-school level—and this extension should be a great gain in the present emergency.

Measuring Civic Attitudes

It is about a quarter-century since the measurement movement in the field of education got significantly under way. As everyone knows, progress was rapid during the first half of the period, especially while the test-makers and the test-users were content with measuring information and skills. With accumulating experience the conviction emerged and grew that tests and testing must go far beyond these more immediate and objective outcomes of learn-

ing and include the less tangible but more important goals of understanding and attitude. Efforts in the development and application of tests have, during the past decade, been increasingly focused on these goals. It is a truism to say that progress in measuring the less tangible outcomes is vastly more difficult and, therefore, much slower.

The *School Review* aims to keep its readers in touch with the trends in the movement as it relates to the secondary-school level. Instances of this purpose are the article by R. J. Longstreet, which appeared in the March, 1935, issue, reporting an experiment with scales of attitudes in certain high schools of Florida, and the article by A. C. Rosander in the present issue, which reports a study involving the application of scales of attitude. From the standpoint of the *School Review* such articles are published, not because they represent anything resembling consummation, but rather because they illustrate the present extent of progress and the difficulties in this phase of measurement. It seems fair to assume that this point of view is also that of the authors. The two studies are of special interest when the issues of indoctrination are so much in controversy as they are today: these investigations are first inquiries into how much indoctrination is being accomplished or can be accomplished under school and classroom conditions.

Because both the studies undertook to apply scales of attitude toward the Constitution, it is appropriate to point out special difficulties of the problem of measurement in this aspect of civic training. The difficulties may be brought home by recalling a "proposition" put forward a few years ago by Professor Charles E. Merriam, of the University of Chicago, in his monograph *The Written Constitution and the Unwritten Attitude*. The proposition is "that a constitution is in a sense a state of mind, and can be changed by changing our mind." Following is a portion of Professor Merriam's elaboration of the proposition.

> The truth, difficult for many to realize, is that a constitution does not consist of words alone but of public attitudes and habits. It is not a document alone, but a general understanding as to ways of doing things political. We deceive ourselves when we conclude that there is magic in the written word, apart from the situations of which it is a part. Words, it is true, have their own peculiar sym-

bolic power which must not be underestimated, but the symbolism itself is of little value if it is not representative of what is socially living and active. There is nothing so dead as a dead symbol, as anyone may testify who sees some of the ancient monuments of departed glory in older lands where change has swept over the face of power and brought new authority with it. What power have the imperial emblems of Germany, of Austria, of Russia, except to irritate and alarm?

It is more than likely that the evidence of such studies as those of Longstreet and Rosander bears more on the symbol "Constitution" than on more specific attitudes or states of mind toward it. These are so diverse and numerous as to call for a number of different scales if measurement is to be valid and significant.

The Junior-College Movement on a Wide Front

In these times materials coming to the desk of the editor of an educational periodical often yield evidence of the prevalence and the vitality of the forces behind the junior college. The materials are many and of diverse sorts. We draw on a few examples.

A bulletin of the State Department of Education in California, which bears a publication date of 1934 but which was received only recently, reports the statistics of junior colleges in that state for the school year ending in June, 1934. One of the tables included discloses the growth in numbers of public junior college units and in enrolments from 1917–18 to 1933–34. During this interval of years the number of institutions increased from 21 to 37 and the number of students from 1,561 to more than 35,000. Except during the first few years, each year throughout the interval saw a marked growth in enrolment over the preceding year. The increase from 1929–30, the first year of the depression, to 1933–34 was from 20,561 to 35,053. The enrolment in the latter year was approximately a third of that in all junior colleges of the country.

A circular from the Department of Public Instruction in Michigan reports the passage of a new law enabling school districts to pay junior-college tuition and permitting counties to aid school-district colleges. Authorization for payment of tuition is by a majority vote of electors in a district and may be for a part or the whole of the tuition. The law permits payment only to the nearest school district maintaining a legally established junior college. The school district

may also provide transportation to and from the junior college. The permission to aid school-district colleges authorizes payment up to fifty dollars annually "per unit of membership."

Report on developments in Michigan should include reference to the "Freshman colleges" maintained during 1934–35. These units are not fully classifiable as junior colleges but bear an important relation to the movement. There were 99 such Freshman colleges, enrolling from 20 to more than 200 students. To be eligible for admission, students were required to be graduates of senior high schools. Approximately 475 teachers were employed. The subjects offered were those usually given in the Freshman college year, but a number of "non-credit" courses were also made available. For purposes of general administration the state was divided into seven areas, and each area was placed under the general sponsorship of one of the regularly established collegiate institutions of Michigan.

Still another development in the realm of the junior college is that reported by J. Z. Jacobson in a recent number of *B'Nai B'Rith*, the National Jewish Monthly, under the caption, "Depression Produces a 'Jewish' College." We quote informative excerpts of the article.

> The People's Junior College arose spontaneously out of efforts to meet the challenge of the depression. More specifically, this school is a living, working, practicable experiment in co-operative education, with the student body, the faculty, and the Jewish People's Institute functioning as the three sides of a mutual-aid triangle. Then again, chiefly by virtue of the general circumstances under which it was established and operates, together with the specific circumstance that it is a "Jewishly" sponsored school and that its student body and faculty are preponderatingly Jewish, this college offers some object lessons, positive and negative, as regards education methods, extra-curriculum student activity, and student-teacher relationship.
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> The closing of Crane Junior College by the city of Chicago, as part of its economy drive at the end of the 1932–33 school year, deprived thousands of boys and girls of the opportunity to carry on their college education. Many of them were able to pay a small tuition fee but not the rates charged by privately endowed colleges. A number of college teachers, thrown out of employment by the depression, immediately recognized in the situation a chance to help others while helping themselves. They consulted with Dr. Philip Seman, and he made available to them classrooms, laboratories, recreation facilities, the library, and the gymnasium in the Jewish People's Institute, of which he is director; moreover, the Institute assumed the sponsorship, and Dr. Seman accepted the presidency, of what soon developed into the People's Junior College.

In the fall of 1933 the new college got under way with calm determination but without any fanfare. No one knew for certain whether it was to be permanent or a mere makeshift until the situation in the Chicago public-school system cleared up and the depression, to a degree at least, had subsided. A year passed, and then the Chicago school board opened three junior colleges to replace the one which had been closed. Casual observers saw in this the end of the P.J.C., but now, as it is rounding out the second year of its existence, its attendance stands at 434, or 33⅓ per cent more than its opening enrolment. . . . .

A wide range of courses were given [in the last semester of 1934–35], courses leading directly to Ph.B., B.A., and B.S. degrees, premedic, prelegal, predental courses, courses of training for professional work in advertising, accounting, corporation finance, engineering, public speaking, journalism, and creative writing. The curriculum includes an extensive schedule of subjects in English composition, English and American literature, modern history, American history, English history, political science, economics, business administration, psychology and sociology, German, French, mathematics, physics, chemistry, and zoölogy. . . . .

The general program and facilities of the Jewish People's Institute afford a well-nigh ideal background and field of operation for the numerous other-than-classroom functions of the college. The splendid theater, with its excellently performed plays in English and Yiddish, its star concerts, its lectures, debates and symposia, brings the world of living art and thought to the very doors of the college. Then there are the painting and sculpture department, with its periodic exhibits; the reference library; the spacious gymnasium and swimming pool; the book and supply store, with its quick-service mimeograph equipment; the restaurant, which serves meals daily and banquets whenever they are required. . . . .

Of special interest to observers of educational developments in the United States are the Jewish phases of the new college—to all observers and to Jews, in particular, of course. The P.J.C. did not set out to be a "Jewish" college; it was, as has already been indicated, organized to meet imperative, immediate needs. Its being sponsored by a Jewish institution is, in part, a mere coincidence. Yet, taking into consideration along with this the fact that more than 90 per cent of the student body and more than 75 per cent of the faculty are Jewish, we can hardly avoid classifying the P.J.C. as a "Jewish" college. Indeed, plans are under way to add to the curriculum next year a course in Jewish history; and undoubtedly this will be followed by the introduction of other Jewish subjects. The P.J.C., then, is the first accredited "Jewish" college in the United States.

Our final instance is drawn from an article in the London *Times Educational Supplement* entitled "District Colleges." The correspondent proposes for England a new school of a modified day-

continuation type for youth beyond school-leaving age, fourteen to eighteen years. The program and the procedures contemplated, as indicated in the following quotation, would differ widely from those characteristic of conventional schools.

> A new technique, in fact, will be demanded to meet the new circumstances, for the pupils in day-continuation schools under public control will not have either the home surroundings and general supervision of a public-school boy nor the special incentives to work and discipline which influence the young worker attending a school connected with his own place of employment. It is possible to picture a system of day-continuation schools housed in suitable buildings with space for physical training and recreation forming centers of social life for all the young people of a district. The buildings and the course of study provided should be supplemented by social and recreational activities so that the whole enterprise may offer attractions far outweighing any real need of compulsion. A "District College," with special provision for young people, would be an excellent form of educational institution.

The age represented is lower than that of students in American junior colleges. Also, the program would, as in all day-continuation plans, be a part-time affair. However, in a consideration of elements of analogy to the developing junior college in this country, it is necessary to remember that secondary education in England is far less popularized than in the United States. This fact adds strength to a belief that the "district college" contemplated has something in common with the junior-college movement.

Trends of Enrolment in Elementary- and High-School Grades

The assistant statistician in the United States Office of Education, David T. Blose, has compiled "preliminary data, subject to change" on enrolments in elementary-school and high-school grades in forty-one states and has computed the percentage of change from 1931–32 to 1933–34 for each grade and for the two groups of grades (elementary and high). The results are reported in the accompanying table. In general, the figures are in line with trends for the years immediately preceding in that they show a decline for most elementary-school grades and an increase for high-school grades. Specifically, they show greatest declines in the lower elementary-school grades, the figures reflecting the recent decline in the birth-

rate, and greatest increments in the upper high-school grades, reflecting the current dearth of opportunities for employment. It is interesting, although to be expected, that the upper elementary-school grades share in the increase at the high-school level.

These trends are, of course, reflected in most local school systems. An illustration is at hand in the annual report to the Board of Educa-

PERCENTAGE OF CHANGE IN ENROLMENT BY GRADES IN 41 STATES FROM 1931–32 TO 1933–34

Grade	Percentage of Change
Kindergarten (29 states)	−10.8
First	− 4.8
Second	− 5.6
Third	− 1.8
Fourth	− 0.4
Fifth	− 1.6
Sixth	+ 0.6
Seventh	+ 5.8
Eighth	+ 2.4
Total elementary	− 1.6
First-year high school	+ 1.5
Second-year high school	+ 8.7
Third-year high school	+11.3
Fourth-year high school	+12.5
Post-graduate (17 states)	+70.4
Total high school	+ 8.0

tion of Arthur E. Erickson, superintendent of schools at Ironwood, Michigan. The report includes a section on trends in school enrolments for the ten years from 1926 to 1935. The elementary-school enrolment dropped off during the period from 3,321 to 2,497, and the high-school enrolment mounted from 762 to 1,277. Computation of index numbers in which the enrolment for 1930 is used as the base shows that the elementary-school index drops from 107 to 80.5 and the high-school index rises from 84 to 141. The text of the annual report directs attention to problems to which the diverging trends give rise.

Instruction in Automobile-driving on a State-wide Basis

The following report of a state-wide program of instruction in automobile-driving in New Hampshire appeared in the *Christian Science Monitor*. Similar developments elsewhere which have been previously noted in the *School Review* took place in local schools and systems.

Plans to extend a course in automobile-driving to every high school in New Hampshire by fall are under way today at the office of the state commissioner of education. A sample course, held in increasing numbers of high schools last term, drew so many students to this new twist in safety education as to justify its speedy inclusion in the regular curriculum of every school.

School authorities figured that it is just about a necessity today to know how to drive an automobile. And, realizing that schools are supposed to prepare their pupils to meet existence as it comes, they decided to send their boys and girls forth with at least an elementary knowledge of automobiling.

The project began a year ago as the result of a little planning between two commissioners of New Hampshire's government. The commissioner of education furnished the teachers, the commissioner of motor vehicles furnished support and ideas. A committee was formed, a course and outline of study drawn up, and the first students enrolled. It was no trouble to enrol students; they came happily and eagerly. The very idea of learning to drive a car was enough to attract them. The course was an after-hour affair, yet they enrolled by the hundreds.

In Nashua high school a total of 325 signed up, in Keene 162, in Concord 150. Fifty-seven schools out of the 103 in New Hampshire had established a course in automobiling before the year was over.

The state believes that it is doing more than prepare students for future driving tests before state officers. It feels that it is adding much to general highway safety.

"It will take several years before a new crop of drivers can be trained," said Director Wilkins of the State Motor Vehicle Department, "but if a point can be reached whereby every high-school student, before graduation, can be taught the do's and don't's of sensible driving, then some really beneficial results will be forthcoming."

In furtherance of this plan, efforts are now under way which it is felt will result in the placing of the course in every high school of the state by the opening of the fall term. And while it may be a non-credit course, the past reception it has received leads teachers to believe that every student who can spare the time will sign up for the new instruction.

It's more than a routine course in reciting the rules of the road. To be sure, New Hampshire regulations are studied and commented on and their main

facts established firmly in mind. But the class gets even further down into what makes for good driving than that.

Use is made of the modern visual means of education. There are motion pictures, diagrams, and posters to show the whys and wherefores of speeding. The dangers of excessive speed are portrayed, with attention to what happens when it is indulged in. Likewise driving on the wrong side of the road is studied as to cause and effect, and the effect of fatigue and alcohol on drivers is explained.

Fundamental as these points are, the course gets down to even closer fundamentals. The authorities realized that some knowledge of the inward parts of an auto is necessary for any competent navigation of the highways, and so they included in the course a careful examination of the mechanism of the average auto. The carburetor, the ignition system, the transmission—all are explained with the use of working models. The brakes are likewise studied and practical points given on how to prevent skidding and how to get out of skids once they start.

An examination follows the course, and, when that is over, a student is likely to feel pretty competent about driving dad's car. But the examination credit won't entitle the pupil to a state license; he still has to take the regular state tests. Most of the boys and girls, however, feel . . . . more confident of passing the state driving test after they have passed the school's examination.

The course has attracted considerable attention in other states as being a practical means of developing a generation of competent drivers. Massachusetts already has a committee of headmasters working out a similar program. Rhode Island has a similar yet modified course, and Connecticut is considering making the course a part of its school system. CCC camps have asked for information, and states as far west as California have asked for data as to the scope of the plan.

The University of Washington's "College of Education Record"

From the University of Washington, Seattle, has come Volume I, Number 1 of the *College of Education Record* published in May. Dean Uhl of that college opens the issue with the statement that the *Record* begins its career as the messenger of the Bureau of Educational Research and School Service of the University. In addition to this opening statement, there are brief discussions of educational problems by educational leaders of the state outside the University, a summary of a research project, statements concerning a summer conference planned to be held at the University and concerning the summer session, a book review, and "faculty notes" and other items of news.

In content and makeup the *Record* is similar to the *School of Education Bulletin* published by the University of Michigan. The *Col-*

lege of Education Record should serve well the purpose of keeping school people of Washington in touch with the activities of the College of Education.

Problems of Vocational Education

The United States Office of Education has recently published a bulletin on *Federal Co-operation in Agricultural Extension Work, Vocational Education, and Vocational Rehabilitation* (Bulletin Number 15, 1933), by Lloyd E. Blauch. Examination shows it to be a treatment well designed to furnish an understanding of the historical and social background of federal co-operation in this important area of education, the present plan of operation, and the status of federally aided vocational education at the secondary level. It is impossible to provide here a summary of the almost three hundred pages of content, and our chief purpose is to call attention to the fact that such a study has been made available. However, we take the opportunity of quoting two brief sections.

Problems in the Field

It was inevitable that any such broadening-out of educational functions as that involved in the assumption by the public schools of the responsibility for providing vocational training of less than college grade for boys and girls and adults of all ages, in the fields of agricultural, trade and industrial, and home-making employments, should develop administrative problems for local and state officials. This new order of educational service required, among other things, the adoption of relatively flexible time schedules, the modification or abandonment in vocational work of certain established academic standards, the clear definition of vocational objectives in the scheme of secondary education, and the organization of instruction in many lines on an individual rather than a group basis. In its report to Congress in 1930, the Federal Board noted the "tendency to organize vocational work on the same basis as that of the regular secondary schools, which commonly set up courses of one year, two years, or one or two semesters, wherein the student gets what may be called a 'fixed exposure.'" The Board also said: "Recent surveys have shown that in a considerable number of courses the time allowed has been inadequate to train the student properly for the employment level which the school authorities have designated as the level with reference to which the work has been organized." On the other hand, it has been found that meeting the need for short-unit intensive training courses may in some cases involve a breaking-down into smaller units of the traditional time schedule under which trade and industrial training has been organized in the past.

Some confusion of general education objectives with specifically vocational

objectives still persists in certain communities, especially as regards the objectives of such general education courses as manual training and industrial arts as distinguished from those of specifically vocational courses. This confusion, where it has prevailed, has tended to impair the efficiency of the vocational program.

Finally, since pupils accepted for vocational training may individually advance rapidly, or slowly, or in some exceptional cases not at all toward the goal of employability on a wage-earning basis, vocational instruction must, it is contended, be organized on an individual basis more extensively than has been done in general education courses. Administrative problems have arisen in the effort to fit a scheme of instruction organized to develop specific individual efficiencies, into a scheme organized to provide groups of pupils with certain disciplines of cultural and social value.

None of these problems, it may be noted, has been in any way associated with the policy of granting national aid for the promotion of vocational education. They were inherent in the evolutionary process of secondary education in this country to embrace specifically vocational together with traditional academic objectives. The vocational-education movement did not propose that the new objectives should supplant the old, but only that they should be comprehended along with the old in the scheme of public-school education. The problems of building the new order into the old were bound to be encountered whether or not the national government participated in providing financial aid.

The Philosophy of Vocational Education

It will be apparent that promotion of vocational education under the act of 1917 has involved some breaking-away from traditions in public-school secondary education in this country. Specifically it has effected a broadening-out of secondary education to embrace a field of training quite outside the limits as defined in academic tradition, which in the judgment of some educators were becoming too narrowly restrictive in that they were not taking sufficiently into account the needs of youth who would never go to college, but were being held in school under compulsory-attendance laws, and dropping out at the earliest opportunity to enter directly into non-professional and manual-labor employments. Under these conditions, it was contended, the functions of secondary schools should be broadened to include specific preparation for the commoner employments into which the majority of public-school pupils were going, and also to provide for the requirements of adult workers who might need training along the lines of their daily employment or for occupational adjustment.

It is assumed that a social responsibility rests upon the public schools to provide vocational training in so far as such training may be advantageously organized under public supervision and control. Such training is conceived to occupy in secondary education much the same position as vocational training for scholastic, scientific, liberal-arts, and professional careers occupies in the curriculums of higher educational, professional, and engineering schools. In other

words, it is contended that the scheme of secondary education should be expanded to embrace as it has been sometimes put, education for work along with education for citizenship, for leisure, or specifically for college entrance.

Not many persons conversant with developments in vocational education will be disposed to deny that the problems mentioned are important. Some will wonder whether the brief list comprehends all important problems. One problem may be mentioned which looms large just now when young persons completing programs of vocational training are unable to secure employment at the young ages at which they presumably are ready for it. This problem centers in the questions of the duration of the program of general education that should precede or accompany the vocational education and the school level at which the vocational training should be pitched. It now appears that much of vocational education may desirably be elevated to the junior-college level. Failure to mention this problem in the present bulletin is explainable by the year for which it was listed for publication—1933. The manuscript must have been prepared before this date and doubtless before the problem referred to was as apparent as it is at present.

Loyalty Oaths for Teachers

Below are quoted excerpts from a late release of the American Civil Liberties Union reporting the results of a survey of legislation requiring loyalty oaths of teachers.

Loyalty-oath laws for teachers were enacted despite the determined opposition of teachers' groups, distinguished educators, and well-known liberals in seven states in this year's legislative sessions.

Not since 1931, when six states passed these laws, has the propaganda behind such bills been so thoroughly organized. The drive for the legislation was headed by the Daughters of the American Revolution and was supported by the American Legion, the Hearst newspapers, the chambers of commerce, the Elks, and all the allegedly patriotic societies. The oath bills were part of a broad program of state gag legislation, which included stringent sedition bills and measures barring left-wing political parties from the ballot. Blocked on their complete program, the forces described . . . . as "the united front of reaction" enjoyed more success in loyalty bills.

Opposing the proposals as an "unnecessary and insulting threat to academic freedom" were such distinguished individuals as James B. Conant, president of Harvard University; William A. Neilson, president of Smith College; Mary E. Woolley, president of Mount Holyoke College; Robert M. Hutchins, president

of the University of Chicago; Felix Frankfurter; Alexander Meiklejohn; and Dr. Charles A. Beard. Joining with them and hundreds of other educators were parent-teacher groups, the American Federation of Teachers, the Progressive Education Association, adult-education groups, and branches of the National Education Association.

Introduced in sixteen states this year, bills were defeated in seven and vetoed by governors in two. An unsuccessful effort was made to pass in the House of Representatives at Washington a resolution calling on the states to enact loyalty-oath laws. In all, twenty states now have laws requiring teachers to take oaths of loyalty, ten of them affecting teachers in private and parochial, as well as public, schools, and four of them applying to aliens as well as to citizens. . . . .

The states having these laws on their books with the years of enactment follow: Arizona, 1935; California, 1931; Colorado, 1921; Georgia, 1935; Indiana, 1929; Massachusetts, 1935; Michigan, 1931 and 1935; Montana, 1931; New Jersey, 1935; New York, 1934; North Dakota, 1931; Ohio, 1919; Oklahoma, 1923; Oregon, 1921; South Dakota, 1921; Texas, 1921; Vermont, 1935; Washington, 1931; West Virginia, 1923. Rhode Island has required a pledge of loyalty from all teachers for more than fifteen years without a law.

Vigorous and persistent effort by all friends of our schools and society will be required to offset the propaganda for these sinister laws.

Who's Who in This Issue

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TEACHING HIGH-SCHOOL PUPILS HOW TO STUDY[1]

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As part of a larger study the purpose of which is a bettered articulation between high school and college, how-to-study courses have been conducted in several large secondary schools in Buffalo. A number of the classes have been instructed by the writers. The content of these courses, together with their effects on school work, is described in the following pages.

The course netted one-half unit of high-school credit. The pupils were required to do a moderate amount of home study and to pass a simple final examination. They were particularly encouraged to apply the suggested study techniques, although no method of checking was devised to see how frequently they did so. The class training included instruction in each of the following units: (1) the value of good study habits and of a good high-school record; (2) note-taking; (3) improvement of reading ability; (4) the theory of habit formation and how to apply it; (5) improvement of memory; (6) problem-solving, reflective thinking, and the scientific attitude; (7) methods of preparing for and of writing examinations; (8) improvement of vocabulary (especially emphasized in Experiments A and C); and (9) the use of the library (included only in Experiments C and D). In addition, every effort was made in short, after-school chats and in one personal conference with each pupil to improve the morale of the individual by showing him his academic potentialities, by helping him plan a course of study to achieve his educational goal, and by aiding several to regain a lost self-confidence. Among the last named were a few pupils who made notable gains in their school averages.

[1] This study was made possible through a grant from the General Education Board. The writers wish to express their appreciation of the helpful co-operation of M. Smith Thomas, principal of Hutchinson Central High School, and of Frank R. Gott, principal of Lafayette High School, both of Buffalo.

EXPERIMENT A

Method.—During the school year 1932–33 the class in Experiment A met for forty-five minutes twice a week during the first semester and three times a week during the second semester. Two small sections met during the school day, but the majority of the pupils took the course after school from 3:00 to 3:45 P.M. Enrolment was voluntary, and about ninety Juniors started the course. Since a voluntary after-school class must compete with extra-curriculum activities, the accumulated weariness of the day, after-school work assigned by other teachers, aversion to drillwork, and lack of interest, this number decreased rapidly. Sixty-five pupils remained to begin the second semester. A few more dropped out subsequently. Fifty-one pupils passed the final test.

Results in Junior year.—The immediate effects of the how-to-study course on marks in the Junior year were studied by comparing the average marks earned during the Sophomore year with those earned during the Junior year by the pupils completing the course and by 195 other Juniors selected at random. (Pupils who started but did not complete the how-to-study course were excluded.) The heavy black dots in Figure 1 represent the how-to-study pupils; the open circles, all others. A trend line for both groups has been calculated and charted. The zigzag line divides those whose average marks during their Junior year were poorer than their marks during their Sophomore year from those who maintained a constant average from one year to the next or those who improved their marks. The improvement or the decrease in marks is in direct proportion to the distance from the zigzag line.

It will be noted that the average marks of the large majority of the pupils dropped from the second to the third year of high school (from 83.7, with a standard deviation of 4.7, to 79.9, with a standard deviation of 4.4, for the 195 random cases). There was considerable overlapping of the two experimental and the non-experimental groups, although the non-trained pupils lost more in their averages than their how-to-study classmates (from 83.4, with a standard deviation of 4.8, to 82.5, with a standard deviation of 4.8, for the latter). The loss in the average mark of the 195 random cases was about 4 points, while the pupils trained in how to study came close to main-

taining their Sophomore average. Those pupils whose averages increased from the second to the third year were largely in the class in how to study.

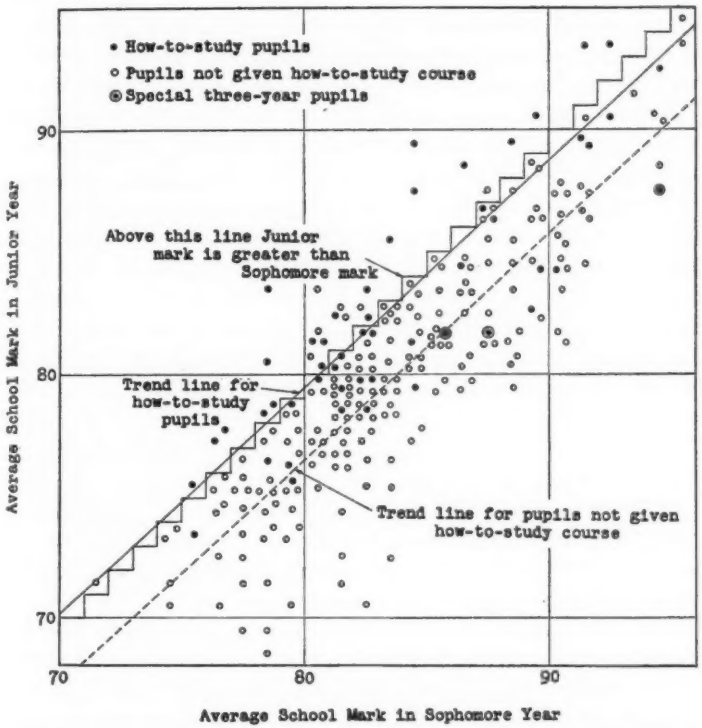

FIG. 1.—Comparison of average marks earned in Sophomore and Junior years by 51 high-school pupils given instruction in how to study and 190 pupils not given such instruction (5 pupils whose marks in the Sophomore year were below 70 are not included).

Superior high-school Juniors seem to benefit from a course in study techniques as much as, if not more than, those of lesser accomplishment. This finding may well be due to the fact that the course content was directed to meet the needs of the better-than-average pupil. Further, it is interesting to note that a poor rapport between

the instructor and the pupil was present in the case of several of the experimental group whose grades dropped considerably.

In a statistical attack on this material the experimental pupils were paired with other members of their class with respect to sex, age, number of semesters of high-school attendance, number of units of credit, number of courses failed, curriculum, Sophomore average, and in thirty-seven cases percentile on the American Council Psychological Examination, Form 1931. No controls could be found for one boy who entered secondary school at the age of ten and who maintained an average of about 95 nor for three pupils (in Figure 1 they are marked by a dot within a ring) who completed their high-school work in three years rather than the usual four. The average marks in the Sophomore and the Junior years for the remaining forty-seven experimental pupils, their paired control group, and a larger random sampling are presented in Table I. The differences in favor of the trained group were statistically significant and reliable for the Junior marks. (How-to-study marks were not included in the average mark.)

Five of the forty-seven experimental pupils, or 10.6 per cent, left school at the end of their third year; eleven of the forty-seven paired controls, or 23.4 per cent, left school at the same time. It would seem that the how-to-study course improved the holding quality of the school. This difference, however, was not statistically reliable for the number of cases studied.

The experimental and the control groups had been paired with respect to the number of units of high-school credit earned as well as the number failed during the pre-experimental year. (The two groups averaged 7.3 units of credit and 1.05 units of failure at that time.) During the experimental year both groups failed an average of 0.7 of a unit of credit. The trained pupils, however, earned an average of 4.6 units, and the control pupils earned only 3.5 units. The greater number of credits earned by the experimental group included one-half unit of how-to-study credit, credit obtained by some pupils who took examinations without attending classes in the subject, and credit obtained by carrying heavy loads. The experimental group carried an average of 4.77 units of work (standard deviation, 0.51) during their Junior year; the control group, 4.23 (standard

deviation, 0.36). It should be added that in the second semester of the experimental period the control group repeated more courses because of previous failure than did the trained pupils, although, to be certain, both groups did some repeating.

One further measure was investigated for differences between the two groups. New York State Regents' examinations are taken by

TABLE I

AVERAGE MARKS MADE IN SOPHOMORE AND JUNIOR YEARS BY 47 HOW-TO-STUDY PUPILS, 47 CONTROL PUPILS, AND 195 RANDOM CASES

	Sophomore Mark		Junior Mark		Correlation between Sophomore and Junior Marks
	Average	Standard Deviation	Average	Standard Deviation	
1. How-to-study pupils	83.4	4.8	82.5	4.8	0.87
2. Paired control pupils	83.6	4.3	78.9	4.4	0.79
3. Random cases	83.7	4.7	79.9	4.4	0.87
Difference (1−2)	.....	.....	3.6	0.47*	.....
Difference divided by standard deviation of difference (1−2)	.....	.....	7.7	.....	.....
Difference (1−3)	.....	.....	2.6	0.77†	.....
Difference divided by standard deviation of difference (1−3)	.....	.....	3.4	.....	.....

* E. F. Lindquist, "The Significance of a Difference between 'Matched' Groups," *Journal of Educational Psychology*, XXII (March, 1931), 197–204.

† Henry E. Garrett, *Statistics in Psychology and Education*, pp. 128–33. New York: Longmans, Green & Co., 1926.

pupils at the end of each subject which has but one subject in a sequence, at the end of the second and the subsequent years of language, and at the end of the third and the fourth years of English. An average of all Regents' marks was calculated for each pupil for the pre-experimental, the experimental, and the post-experimental years. (This measure is frequently based on a limited number of examinations and is, therefore, somewhat unreliable.) The groups were not paired in computing the Regents' average, as is shown by pre-experimental averages of 76.6 and 75.4 for the experimental and the control groups, respectively. During the year of training the experimental group made an average of 75.9 on the Regents' examinations; the control group, an average of 73.8. The differences on this meas-

ure were not reliable, although they were in the same direction as those for the average school mark.

To summarize, the how-to-study pupils made a better average mark during the experimental year (and the difference was reliable), carried a heavier class load, and earned more credits than did the control group. Said otherwise, the group taking the course in study techniques not only accomplished more in quantity but also produced a better quality of academic achievement.

Follow-up during the Senior year at high school.—Forty-two of the original forty-seven experimental pupils returned for their Senior year at high school. The pupils whose control classmates had left school were paired, on the bases already described, with other pupils still in school. To meet all the pairing requirements was difficult. Our best efforts unfortunately produced a control group with an average school mark one point higher than the average for the trained pupils.

A comparison of the marks of the groups is given in Table II. The how-to-study class members seemed to hold some of the advantage gained during their Junior year over to their Senior year. The difference between the experimental and the control groups was reliable. However, the difference between the random group and the experimental group was not large and was not reliable. When the thirty-three pairs in which both the experimental and the control members remained in school were considered, the Senior averages were 81.6 (standard deviation, 4.5) for the experimental group and 78.0 (standard deviation, 5.3) for the control group. Their Sophomore averages were 84.1 (standard deviation, 4.6) and 84.4 (standard deviation, 4.8), respectively. The difference in the Senior averages was statistically reliable.

Eighteen of the control group and only nine of the experimental pupils failed to graduate in June, 1934. During their Senior year the experimental group earned, on the average, 0.6 of a unit more credit than the control pupils. The former group failed 0.55 of a unit, and the latter failed an average of 0.91 of a unit. The two groups carried about the same number of subjects during the Senior year.

The average marks on the Regents' examinations for this period were 75.3 for the trained group and 71.8 for the control group.

There was a reliable difference in favor of how-to-study training. When only the thirty-three pairs in which both members remained in school were considered, the drop in the Regents' average from Sophomore to Senior year was slightly less for each group. In this case also the control group lost more than the trained pupils, and the difference was reliable.

TABLE II

AVERAGE MARKS MADE IN SOPHOMORE AND SENIOR YEARS BY 42 HOW-TO-STUDY PUPILS, 42 CONTROL PUPILS, AND 276 RANDOM CASES

	Sophomore Mark		Senior Mark		Correlation between Sophomore and Senior Marks
	Average	Standard Deviation	Average	Standard Deviation	
1. How-to-study pupils	83.9	5.0	81.7	4.6	0.87
2. Paired control pupils	84.9	4.2	80.3	3.9	0.79
3. Random cases	84.0	4.5	81.2	4.7	0.62
Difference (1−2)	− 1.0	.....	1.4	0.31*	.....
Difference divided by standard deviation of difference (1−2)	.....	.....	4.5	.....	.....
Difference (1−3)	− 0.1	.....	0.5	0.76†	.....
Difference divided by standard deviation of difference (1−3)	.....	.....	0.66	.....	.....

* By the Lindquist formula. If the original advantage of the control group is considered, this quotient increases to 7.7.

† By the usual formula for the standard deviation of a difference. If the slight original advantage of the large random group is considered, this quotient increases to 0.79 (79 chances out of 100 that the difference is true and reliable). If the Lindquist formula is used, the standard deviation of the difference is reduced to 0.29, and the difference divided by the standard deviation of the difference becomes 1.72. If the slight original advantage of the large group is taken into consideration, the difference divided by the standard deviation of the difference becomes 2.07 (98 chances out of 100 that the difference is true and statistically reliable).

One further comparison of the Senior year's work of these pupils may be drawn. The how-to-study group earned a total of forty-five hours of anticipatory college credit during their Senior year, but the control group *in toto* earned only six hours of such credit. Again, the experimental pupils prepared for, and were examined on (but failed), an additional thirty-six hours of credit as contrasted with three hours of credit similarly attempted on the part of the control pupils. It should be stressed that preparing for these examinations means a very real additional amount of academic work on the part of the pupils.

EXPERIMENT B

Method.—During 1932–33 the writers instructed a class of Juniors in study techniques at another school. This class met *during* the school day, three times a week during the first semester and twice during the second. The rapport between the instructors and these pupils seemed poorer than that established in Experiment A. The class, meeting during the school day, seemed never fully to adapt to meeting on alternate days. Frequently the members overlooked preparing assignments, and occasionally they completely forgot to come to class. Furthermore, the instructors tried out their class materials with this group and made very real changes in method and content as a result of reactions obtained here.

This class started with twenty-two members, five of whom were eliminated at the end of the first six weeks. Three more left at the end of the first semester. One pupil came irregularly, and a tenth was a postgraduate pupil for whom no control could be obtained. The results cited concern the remaining twelve pupils, twelve control pupils (paired as in Experiment A), and 121 members of the same class chosen at random.

Results.—A comparison of the marks of these pupils is given in Table III. Both groups tested high, their average on the American Council Psychological Examination being at the seventy-seventh percentile. Pupils from this school, randomly chosen, seemed to lose more in school average from the Sophomore to the Junior year than did those represented in Figure 1. The experimental group more nearly held its own than did the control group or the large random group. The members of the how-to-study class, although they carried one more unit of work than the other two groups, lost but 1.6 points in the average school mark, while the control and the random groups lost 4.2 and 4.8, respectively. The number of experimental and control cases was too small to expect reliable differences in this experiment, but the results were completely consistent with those of Experiment A.

One pupil in the experimental group was graduated in June, 1933, and eleven pupils continued into the post-experimental year. The control group lost 5.6 points in the average mark from Sophomore to Senior year; the experimental group, only 3.1 points. With only

eleven cases, the difference in favor of the trained group was not statistically reliable.

One of the eleven experimental pupils and two of the control pupils were not graduated in June, 1934. The experimental group as a whole failed to pass two subjects during their Senior year and the control group six subjects, in spite of the fact that the trained group

TABLE III

AVERAGE MARKS MADE IN SOPHOMORE AND JUNIOR YEARS BY 12 HOW-TO-STUDY PUPILS, 12 CONTROL PUPILS, AND 121 RANDOM CASES

	Percentile on American Council Psychological Examination	Sophomore Mark		Junior Mark	
		Average	Standard Deviation	Average	Standard Deviation
1. How-to-study pupils	77.4	84.7	4.8	83.1	4.8
2. Paired control pupils	77.5	84.3	4.5	80.1	5.5
3. Random cases	.....	83.7	4.9	78.9	6.3
Difference (1−2)	.....	.....	.....	3.0	1.07*
Difference divided by standard deviation of difference (1−2)	.....	.....	.....	2.8	.....
Difference (1−3)	.....	.....	.....	4.2	1.50†
Difference divided by standard deviation of difference (1−3)	.....	.....	.....	2.8	.....

* By the Lindquist formula. The chances are 99.7 out of 100 that the difference is a true difference. If the slight original advantage of the experimental group is considered, the difference becomes 2.6, and the difference divided by the standard deviation of this difference, 2.43. With this difference, the chances are 99.2 in 100 that the difference is true and reliable.

† By the usual formula. When the original advantage of the experimental group is considered, the chances that the difference is a true and reliable difference are reduced to 92 in 100.

carried, on the average, one-half unit more of subject matter than did the untrained pupils. The average of the marks on the Regents' examinations for subjects passed during the experimental and the post-experimental years showed a definite though slight superiority for the how-to-study pupils. One final difference in favor of the trained group was that they earned twenty-four hours of anticipatory college credit while in high school. The control pupils neither studied for nor earned any such credit.

EXPERIMENT C

Method.—During the year 1933–34 seventeen pupils were trained in after-session classes meeting twice and three times weekly. The

situation was in all ways like that of Experiment A except that the class was much smaller. The average school marks for these seventeen pupils and for a control group during the pre-experimental year were 81.9 (standard deviation, 6.3) and 82.7 (standard deviation, 5.4), respectively; for the experimental year, the averages were 83.2 (standard deviation, 5.7) and 80.9 (standard deviation, 5.8), respectively. That is, the trained group raised its school average 1.3 points, while the control group lost 1.8 points. The Lindquist formula indicates that this difference is statistically true and reliable. In addition, the experimental pupils carried a study load averaging one unit more than the load of the control pupils (5.5 as contrasted with 4.5 units). A slight superiority was also found for the experimental pupils on the average of the marks on the Regents' examination. To generalize, the how-to-study pupils accomplished more in quantity, as measured by the number of units carried, and in quality, as measured by the average school mark, by the number of Regents' examinations passed, or by the average of the marks on the Regents' examinations.

EXPERIMENT D

Thirty-one pupils, about half Juniors and half Seniors, carried the how-to-study course during the second semester of the school year 1933–34. They met during the school day on five days a week. They were paired with classmates on the measures described for Experiment A, except that their school averages for the three previous semesters were used rather than the average for the pre-experimental year only. No psychological-examination scores were available.

The three-term pre-experimental school averages were 80.6 for the experimental group and 80.2 for the control group. For the experimental semester the school averages were 79.9 (standard deviation, 5.0) and 77.1 (standard deviation, 4.8) for the trained and the untrained groups, respectively. The Lindquist formula indicates that the chances are 99 in 100 that this difference is statistically reliable. The superiority of this experimental group over its control group in average mark on the Regents' examination was somewhat greater than the superiority of the other groups. This experimental group did not, however, carry more units of work than its control group, as

had the other three experimental groups. It will be interesting to follow the Juniors trained in this class into their Senior year.

DISCUSSION AND CONCLUSIONS

1. There was a remarkable consistency of results for the two schools and the four groups studied in spite of major differences in procedure. Some classes met after school and some during the school day. Some met five times a week for one semester, and others met twice a week for one semester and three times a week during the second semester.

2. Although there was a definite drop in the average mark from Sophomore to Junior year, the experimental classes nearly held their own. Their Junior-year performance was significantly and reliably superior to that of pupils in the same grade who did not take the course in study techniques.

3. During the post-experimental period the trained groups lost some of the advantage gained during their Junior year, although their average marks were still measurably superior to those of the control pupils.

4. The percentage of the control groups who left school at the end of their Junior year was larger than the corresponding percentage of the experimental pupils, and the number of the former group who failed to complete high school in four years was greater than the corresponding number of trained pupils.

5. The experimental groups earned more units of credit during both their Junior and Senior years than did the control pupils (except Group D, which was studied for only one semester). They also carried a heavier load during and after the training period, and both failed and repeated fewer subjects than did the control groups.

6. The average marks on the New York State Regents' examinations for the control and the trained groups for the pre-experimental, the training, and the post-experimental periods showed that there was a slight drop from the first two years in high school to the Junior and the Senior years. The trained pupils lost somewhat less than the untrained pupils. For the experimental period the differences were not statistically reliable, although for the post-experimental period they were.

7. Finally, when comparison was made of the number of anticipatory examinations attempted for college credit, the number passed, and the number for which additional outside work was done, the experimental pupils completely outstripped the non-trained group.

Although it may not be clear whether the course acted only as a motivational factor bringing the pupils to do better school work or whether it actually made the higher marks easier to get, it is evident that as a result of the course the pupils did superior academic work both qualitatively and quantitatively.

RELATION TO A PARALLEL STUDY

At the same time that the study described in this article was being carried on, Professor Mills,[1] also of the University of Buffalo, was investigating the effects of how-to-study classes on high-school Juniors and Seniors. During 1931–32 he instructed one comparatively small class at each of two Buffalo schools. These classes met during the school day three times each week during the first semester and twice during the second. Subsequently during 1932–33 Mills also instructed one class which met daily during the first semester and another which met daily during the second semester, both during the school day. All told, he taught four classes in three different schools. No reliable differences were found in either the quantity or the quality of the academic work done by the members of the classes taught by Mills and the work done by his control groups.

The classes taught by the writers and by Mills used the same syllabus. The difference in course content from class to class for either the writers or Mills was probably greater than the difference in the course content taught by Mills and by them. In addition, however, to the difference in teacher personnel, the experimental groups described in this article received some small measure of educational guidance and such motivating influence as a personal interview with the instructor may provide. The training which failed to result in improved academic work did not include this element of guidance and personal contact. These differences may explain, at least in part, the discrepancies in results. Visualizing an occupational and

[1] Henry C. Mills, "How To Study Courses and Academic Achievement," *Educational Administration and Supervision*, XXI (February, 1935), 145–51.

academic goal may well aid in providing motivation to apply special study techniques without causing any reduction of the study time invested. Furthermore, differences in teacher attitude toward the value of high marks and intensive study, together with a considerable degree of rapport between teacher and pupils, and other less clearly defined factors may well affect pupil achievement. At the present time these issues remain unclarified.

To aid in the clarification of the first of these issues, the writers are now experimenting with the effect of personal contact. Pupils have been paired on the basis of previous marks, vocabulary, general information, sex, and high-school curriculum. One member of each such pair will be contacted in one interview, and occasionally more. The purpose is to determine whether such guidance and personal contact alone without a class in study techniques is efficacious in improving academic success. The content of the interviews will depend on the individual needs of the pupils. It may include vocational and educational guidance, planning for anticipatory collge credit, how-to-study suggestions, personal problems offered by the pupil, or any combination of these. The writers hope to publish shortly the results of this experiment.

SIX-YEAR TRENDS IN THE LARGER HIGH SCHOOLS OF MICHIGAN

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One of the most interesting studies in which a school administrator can engage is an examination of the ways in which trends in business are reflected in the schools of a state or a nation. Changes may not show up so quickly in well-organized educational systems as they do in business, but they are certain to appear. When they do appear, they usually make necessary just as great reorganizations as are required in business, and the new conditions last even longer. The following study of some figures submitted in reports from the larger secondary schools in Michigan—those which are members of the North Central Association of Colleges and Secondary Schools—during the years 1929–34 will be of interest, not only to men and women engaged directly in education, but also to parents and business men.

Trends in enrolments in these larger high schools, in the number of teachers employed, in the number of new teachers employed each year, in the pupil load being carried each year by the teachers, in the salaries paid to different groups of teachers, and in the amount of money spent each year on the library are shown in Table I. The figures in the table were taken from annual reports submitted to the state chairman of the North Central Association during the first semester of each school year.

The one general condition which seems to be clearly evident is that the depression did not hit schools hardest either in 1929–30 or in the following year. In fact, increased expenditures for library, better average salaries, and other items indicate that 1930–31 was a better year than 1929–30. Schools began to feel the pinch during the year 1931–32.

TRENDS IN ENROLMENTS

The number of schools increased from 189 to 214, a 13 per cent increase during the six-year period. The enrolment of boys increased

TABLE I

SUMMARY OF DATA REPORTED IN SCHOOL YEARS 1929–30 TO 1934–35 BY NORTH CENTRAL ASSOCIATION HIGH SCHOOLS IN MICHIGAN

	1929–30	1930–31	1931–32	1932–33	1933–34	1934–35
Number of schools	189	209	207	211	214	214
	Pupils Enrolled					
Number of boys	54,149	56,235	62,293	68,943	70,323	71,277
Number of girls	59,163	60,936	65,804	71,048	72,027	74,721
Total	113,312	117,171	128,097	139,991	142,350	145,998
Percentage of boys	48	48	49	49	49	49
Percentage of girls	52	52	51	51	51	51
	Pupils Graduated					
Number of boys	7,279	7,749	10,149	11,637	12,740	13,872
Number of girls	9,240	9,468	11,622	13,438	14,162	15,216
Total	16,519	17,217	21,771	25,075	26,902	29,088
Percentage of boys	44	45	47	46	47	48
Percentage of girls	56	55	53	54	53	52
	Number of Teachers Employed					
All teachers	4,969	5,217	5,429	5,307	5,162	5,357
Equivalency	4,500	4,662	4,717	4,593	4,456	4,730
	Number of New Teachers Employed					
Academic teachers	602	521	347	244	221	364
Non-academic teachers	418	280	155	83	75	223
Total	1,020	801	502	327	296	587
	Percentage Distribution of Schools According to Pupil-Teacher Ratio					
Pupil-teacher ratio:						
Less than 21	54	42	36	21	18	21
21–25	34	42	34	30	24	32
26–30	12	15	23	35	33	28
More than 30	0	1	7	14	25	18

TABLE I—*Continued*

	1929–30	1930–31	1931–32	1932–33	1933–34	1934–35
	Salary Means					
Minimum	$1,286	$1,422	$1,391	$1,244	$ 975	$1,057
Maximum	2,432	2,577	2,528	2,236	1,770	1,840
Men	1,926	2,092	2,041	1,792	1,447	1,510
Women	1,580	1,752	1,721	1,541	1,227	1,310
	Money Spent on Library					
Per pupil amount	$1.09	$2.08	$1.19	$0.72	$0.43	$0.39

from 54,149 to 71,277, an increase of 32 per cent; the enrolment of girls increased 26 per cent; and the increase for both boys and girls was 29 per cent during the six years. This increase probably results in large part from the refusal of industry to employ young people and from the depression, which brought loss of employment to millions of workers throughout the country and made it almost impossible for even high-school graduates to secure positions. Since there was nothing else to do, large numbers of these young people decided to continue in school or to return to high school if they had already left. Some of the increase is accounted for by postgraduate enrolments, although these enrolments are not a large percentage of the total, as will be shown when the figures for holding power are studied.

In the secondary schools enrolments of boys equal those of girls only in rare instances. In prosperous times it appears that girls greatly outnumber the boys. In the year 1929–30 in Michigan the girls made up 52 per cent of the enrolments and the boys only 48 per cent. The boys have gained on the girls, and in 1934–35 the boys made up 49 per cent of the enrolment and the girls 51 per cent, almost half and half. The percentage of boys who were graduated increased even more than the percentage of boys enrolled. In 1929–30 the boys made up 44 per cent of the total number of graduates and the girls 56 per cent. By 1934–35 these percentages had become 48 and 52, respectively. The number of boys who were graduated in-

creased from 7,279 in 1929–30 to 13,872 in 1934–35, a 91 per cent increase. The number of girls who were graduated increased from 9,240 to 15,216, an increase of 65 per cent.

The number of schools increased 13 per cent during the period under consideration. The total enrolments increased 29 per cent, and the number of graduates during the six-year period increased 76 per cent. Not only were these secondary schools more attractive each year to boys and girls of high-school age, but they also exhibited an increasing holding power each year.

In computing the percentage of the total enrolment graduated in any year, one must keep in mind that school reports show enrolments for the year submitted and the number of graduates for the year previous. For example, in this study the 17,217 graduates reported on the 1930–31 blanks came from the 113,312 pupils enrolled in the year 1929–30; that is, 15 per cent of the pupils enrolled were graduated. In 1933–34 these schools graduated 29,088 pupils from an enrolment of 142,350, or 20 per cent of the total enrolment. This record is unusually good since the expectation might have been that the increase in the enrolments noted during these years was but temporary. It is clear that the pupils enrolling and re-enrolling in the secondary schools were filled with a seriousness of purpose.

NUMBER OF TEACHERS

The entries in Table I in the row "All teachers" give the total number of teachers each year even though some of them may be teaching only part time in the secondary school. The "Equivalency" row gives the total number of teachers who would be needed if every teacher were assigned a full load in the secondary school. The pupil-teacher ratios and all other computations, except those for new teachers, are made on the equivalency figures. Percentages of *new* teachers are computed on the basis of the total number of teachers employed whether for full-time or part-time work. This explanation should be kept in mind as different trends are considered.

During the first *five* years of this period it is noted that the number of "Equivalency" teachers decreased about 1 per cent (from 4,500 to 4,456). During the same period pupil enrolments *increased* 26 per cent. It is encouraging to note that for 1934–35 there was an in-

crease of 6 per cent in the teaching staff over the number employed in 1933–34. The number of teachers employed for the year 1934–35 was, however, only 5 per cent more than the number employed in 1929–30. At the same time that this 5 per cent increase in staff was being made, there was an increase of 29 per cent in pupil enrolment. It is little wonder that teachers have found themselves burdened almost beyond human endurance.

The data on pupil-teacher ratios should also be noted for a better understanding of the situation. The first and last rows of figures in this section of the table are of special interest. During the first year studied, in more than half the schools the average number of pupils assigned to a teacher was less than twenty-one. This desirable situation faded as the years went on until in 1933–34 only 18 per cent of the schools were so fortunate. Improvement was made for the year 1934–35. The percentages of schools with a pupil-teacher ratio of 21–25 did not vary so greatly—a situation which was to be expected. During the first of the six years only 12 per cent of the schools were compelled to arrange a pupil-teacher ratio as heavy as 26–30. This percentage increased year by year, as enrolments increased and the staffs remained about the same, until in 1933–34 in 33 per cent of all schools the teachers were carrying an average load of 26–30 pupils. Improvement is noted for 1934–35 with a drop to 28 per cent for this ratio. The percentages of schools having the unusually heavy ratio of more than thirty pupils to a teacher are disturbing. Not until 1930–31 did any secondary school in Michigan find itself compelled thus to burden teachers, and then there were only three schools (1 per cent) which did so. As times grew steadily worse, increased burdens fell on the schools, and pupil-teacher ratios increased until in 1933–34 one-fourth of all the schools had to assign an average of more than thirty pupils to each teacher. This situation is all the more serious when it is recalled that the North Central Association, in computing this ratio, counts clerks, supervisors, and librarians as half-time teachers—a practice which makes the ratio seem better than it actually is. Again, improvement is noted for 1934–35.

Members of the staffs of teacher-training institutions, as well as many others, will be interested in noting the swing back toward the employment of larger numbers of new teachers in the high schools.

Of course, it is discouraging to find that the number of new teachers used in these schools decreased from 1,020 in 1929–30 to 296 in 1933–34, a decrease of 71 per cent. In other words, 20 per cent of the total teaching staff in 1929–30 were new to these schools, while in 1933–34 only 6 per cent were new. In 1929–30, 41 per cent of the new teachers were non-academic instructors, while five years later only 25 per cent were of this kind. Business was such during this time that these teachers could not leave school and find employment in other fields, as is usually the case. At the same time, schools were curtailing non-academic work and reducing these staffs. The period of the depression has been especially serious for non-academic teachers. In 1934–35, though, there was a change; in that year 38 per cent of the new instructors employed for these schools were non-academic teachers.

As noted, the percentage of new teachers employed decreased from 20 in 1929–30 to 6 in 1933–34. In 1934–35, however, 11 per cent of the faculties were made up of teachers new to these schools. Some of the 587 "new" teachers came from smaller schools instead of coming direct from teachers' colleges, but they left their former places vacant for beginning teachers. If the same ratio of increase continues, schools will again in a short time reach the normal situation where approximately a fifth of the staff members are new each year.

SALARIES PAID

Each high school reports the minimum salary paid, the maximum salary paid, the arithmetic average of salaries paid to men, and the average paid to women. The arithmetic average, or the mean, of the minimum salaries was obtained for each year. Likewise, the mean was obtained for each of the other items reported.

It is apparent that teachers were employed at much lower salaries during the past few years than during earlier periods. The average of the minimum salaries dropped from $1,286 in the first year to $975 five years later, a decrease of nearly a fourth (24 per cent). In 1934–35 there was an improvement, an 8 per cent increase being noted over 1933–34.

The better paid, more experienced teachers suffered even more than the teachers in the minimum-salary group. Those in the higher

brackets found that their salaries were reduced on an average 27 per cent during the five-year period from 1929–30 to 1933–34. An increase of only 4 per cent was made in the salaries of this group for the year 1934–35. In other words, these teachers were hit harder than the teachers receiving minimum salaries, and their recovery is taking place more slowly.

The average salary paid to men increased slightly for the first year, as did all the other averages, and then started on a decline. The decrease for the five year-period was from $1,926 to $1,447, a 25 per cent drop. The recovery for 1934–35 was about 4 per cent. The average for women decreased 22 per cent during the period 1929–30 to 1933–34 and then improved 7 per cent for 1934–35. It appears that the reductions in the salaries of women teachers were not so drastic as those in the salaries of the men and that the decreases which the women received are being restored somewhat more rapidly than are those of the men.

LIBRARY EXPENSE PER PUPIL

In 1929–30 (reported in 1930–31) the libraries were able to obtain more than two dollars for new books and supplies for each pupil enrolled. In the following year the amount dropped nearly half, and it decreased so rapidly that in 1933–34 it was only thirty-nine cents a pupil. Whether there will be an improvement in the reports for 1934–35 is not yet known.

SUMMARY OF THE SIX-YEAR TRENDS

1. Even though the depression struck the business world in 1929–30, it did not seriously affect the North Central Association secondary schools in Michigan until more than a year later.

2. Once started, the school situation continued to grow worse until the year 1933–34, when it reached the lowest point. There appears to have been an improvement in almost all items for the school year 1934–35.

3. During this six-year period the enrolment of boys increased more rapidly than the enrolment of girls; the proportion of boys in the total high-school enrolment increased while the percentage of

girls decreased; and the proportion of boys in the graduating classes increased still more.

4. Before the depression these secondary schools were graduating approximately 15 per cent of their total enrolments. In 1934–35 they appeared to be graduating about 20 per cent of their enrolments.

5. Under ordinary circumstances these schools employ new teachers to the extent of about a fifth of their staff each year. During the depression this proportion went down to only 6 per cent.

6. In employment of new members of the staff non-academic teachers suffered more than academic teachers. The percentage of new teachers who were non-academic teachers dropped from 41 to 25.

7. Teacher loads increased greatly during the period studied. The percentages of schools having the exceedingly heavy loads of more than thirty pupils to a teacher increased from nothing in the first year to 25 for the year 1933–34. Again, there was improvement for 1934–35.

8. Minimum salaries, maximum salaries, average salaries paid to men, and average salaries paid to women—all decreased during the first five years, and all improved somewhat during the year 1934–35.

9. Library expense decreased throughout the period—from $2.08 per pupil for 1929–30 (reported in 1930–31) to $0.39 per pupil for 1933–34 (reported in 1934–35).

HOW HIGH-SCHOOL SENIORS SPEND THEIR TIME

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In an earlier study[1] data were gathered on how college students spend their time. So much interest was manifested in the findings that it seemed well to ascertain the corresponding facts for high-school Seniors. The basic data for this study were collected in the high school at North Platte, Nebraska.

The study included exactly 100 Seniors, 37 boys and 63 girls. This number represents all Seniors, among the 131 Seniors in the school, whose records of the way they spent their time were complete and continuous, uninterrupted by absence or other emergencies. North Platte is a city with a population of about fifteen thousand, and the results of this study are probably a fair representation of what would be found in other communities in the United States.

Each Senior kept a time record for each day on a special printed sheet. Each reported the use of his time for twenty-one days, but reported a Monday for one week, a Tuesday for the next week, and so on until the twenty-one days were reported. In an effort to avoid distortion of the results by the influence of unusual or special events, the group was so rotated that different pupils reported on different days in a given week, and different weeks in the semester. The record for Saturdays and Sundays covered the full time from rising to retiring; that for school days omitted the hours from 9 A.M. to 3:15 P.M., since this period was occupied by school activities which were already scheduled and known. Records were kept on the basis of fifteen-minute units and were posted up at intervals during the day. Activities were recorded in concrete and specific terms and

[1] Alfred G. Goldsmith and C. C. Crawford, "How College Students Spend Their Time," *School and Society*, XXVII (March 31, 1928), 399–402.

were later classified by the investigators into the broader and more general categories used in this report.

For conciseness and perspective in studying the results, the main facts are summarized in Table I. A few interesting points revealed in the table are discussed in the succeeding paragraphs.

TABLE I

AVERAGE NUMBER OF HOURS AND MINUTES SPENT DAILY IN VARIOUS ACTIVITIES BY 100 HIGH-SCHOOL SENIORS (37 BOYS AND 63 GIRLS)

ACTIVITY	AVERAGE NUMBER OF HOURS AND MINUTES SPENT IN ACTIVITY					
	School Days		Saturdays		Sundays	
	Boys	Girls	Boys	Girls	Boys	Girls
Sleep	9- 4	8-45	8-18	9-17	10-21	9-58
At school	6-15	6-15	0- 0	0- 0	0- 0	0- 0
Personal care	0-37	0-54	0-36	1-14	0-48	1- 3
Meals	0-48	0-55	1-25	1-30	1-28	1-34
Work	0-35	0-18	3-48	0-53	1-17	0-32
Chores	0-10	1- 6	0-30	2-55	0- 5	1-13
Study	0-50	1- 2	0- 9	0-41	0-20	0-30
Reading	0-46	0-41	0-50	1- 0	1-16	0-54
Going to and from school	0-42	0-45	0- 0	0- 0	0- 0	0- 0
Extra-curriculum activities	0-42	0-24	0- 9	0- 0	0- 5	0- 3
Religion	0- 3	0- 6	0- 0	0- 4	1-13	1-40
Shows	0-14	0- 7	0-30	0-20	1- 3	0-38
"Dates"	0-10	0-10	0-35	0-26	0-42	0-33
Recreation	0-49	0-32	2-39	1-17	1-32	1- 0
Entertaining	0-18	0-17	0-35	0-48	0- 5	0-38
Loafing	1-13	0-51	1-57	2- 2	2-32	2- 0
Miscellaneous	0-44	0-52	1-59	1-33	1-13	1-44
Total	24- 0	24- 0	24- 0	24- 0	24- 0	24- 0

Sleep.—The young generation seems to get its full eight hours of sleep with a margin to spare. The margin for boys is only eighteen minutes on Saturdays, when they have to work, but they make up for it by sleeping ten hours and twenty-one minutes that night. Their sisters work slightly less and sleep an hour longer on Saturdays.

School day.—The scheduled six hours and fifteen minutes would seem to be almost all the school load. It is supplemented by less than one hour a day of home study. If an eight-hour day is accepted

as standard for manual laborers and clerks, the high-school pupil's day is not too long.

Personal care.—The commonly accepted judgment that girls primp more than boys is supported by the study, although the differences are not great. Judging by the increase in time given to personal care on Saturdays over school days, only the girls treat themselves to the luxury of the proverbial Saturday-night bath.

Meals.—If three meals are eaten on school days in a total of about fifty minutes, as the figures show, there would seem to be cause for alarm on the part of parents and teachers. Such bolting of food can hardly be in the interest of good health and nutrition. The situation is quite different on Saturdays and Sundays, when the average time for a meal is about a half-hour.

Work and chores.—The two items, work and chores, should be considered together, as is shown by the records for boys and for girls. The boys work, and the girls do the chores. In other words, boys work outside the home and girls inside. The increase in the time given these items on Saturdays and Sundays is to be expected.

Study and reading.—In this report "study" means school work, and "reading" means a pastime. Pupils use books for pleasure outside of school about as much as they use books for serious school purposes. If this recreational reading is considered a part of the total educational program, high-school Seniors are shown to have approximately an eight-hour day, on a "split shift," with six hours at school and two at home.

Travel to and from school.—Going to school and going home require about twenty minutes each. This item would probably not vary greatly in cities of different size, since the large cities have more schools and bring them reasonably close to the pupils and in the smaller villages the average time would probably be maintained by the larger number of pupils who cŏme from rural homes.

Extra-curriculum activities.—Extra-curriculum activities take up roughly a half-hour each school day, but these blessings are showered in greater degree on the boys than on their sisters. Only in exceptional cases do these activities consume time on Saturdays and Sundays, and these cases represent largely such items as preparing for a debate or practicing for a musical program.

Religion.—Religious activities are almost wholly confined to Sundays, although almost all choir practices are held on Wednesday and Thursday nights. The absence of noticeable religious activity on Saturdays may suggest a small representation of Jews and Adventists in the student body.

Shows.—The time spent in shows is in harmony with the findings of other studies. Boys spend about two hours and forty minutes a week in shows, and girls give one hour and thirty minutes to this activity. These figures would seem to average about one show a week to a pupil, but again the boys get more than their share of the fun. The natural assumption is that the difference results from parental unwillingness to allow girls to go out alone at night, but the difference is greatest on Sundays, when the girls might attend in the afternoon.

"Dates."—There is an apparent paradox in the fact that boys keep company with girls more than girls do with boys, but this impression is due to the fact that persons outside the school group are involved. Such a difference as there is again favors the boys. The authenticity of the figures is doubtful, however, since many "dates" are unquestionably present in disguise under such heads as "Recreation" and "Entertaining."

Recreation.—Here again the boys have most of the fun. They get twice as much time for recreation as girls on Saturdays and 50 per cent more on Sundays. This item must be considered in relation to the other recreational activities, such as reading and shows, if its fullest significance is to be grasped.

Entertaining.—Giving parties and having friends in the home takes up about three hours a week of the girls' time and two hours of the boys'. Perhaps this item evens up the difference in "dates."

Loafing.—Still the boys have the easiest time; they loaf more than their sisters. Or should they be pitied because they have greater difficulty in finding definite activities to take up their spare time? With an hour a day of pure slack on school days and over two hours on Saturdays and Sundays, there is room for someone to introduce in the school or community a constructive program of leisure-time occupation. The large amount of week-end loafing may constitute

a genuine moral hazard. At least, it offers an excellent opportunity for constructive service.

Miscellaneous activities.—The only importance which the miscellaneous list might have in such a study as this would be the possibility of its containing a large percentage of items that really belong under the other heads. If such were the case, the other findings would be untrustworthy. That other activities have not been included under "Miscellaneous" in the present study is shown by the reasonable degree of constancy in the time given to miscellaneous activities and by the nature of their variations from school days to week ends. These activities are actually irregular items like shopping, seeing the doctor, attending weddings, giving the dog a haircut, and having a photograph taken. They are not disguised forms of the other activities.

Conclusions.—This report shows how the high-school Senior spends his day and week under present conditions in a typical city with a population of fifteen thousand. The question for parents and school people now arises: What alterations should be made in the way the young people spend their time and what school changes will produce these alterations?

A TRAINING SCHOOL FOR PUPIL LEADERS

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The rapid growth of extra-curriculum activities during the past two decades has been due, in large measure, to the fact that leaders in education have come to look on the secondary school as a laboratory for citizenship, where training and guidance in social relationships may enable the pupil to make adjustment to the problems and the opportunities of adult citizenship. Many examples of the actual processes used in the typical secondary school to promote and encourage the growth of desirable qualities of citizenship might be cited. Activities of pupils which create respect for honest workmanship, subordinate personal interests to group welfare, provide opportunities for the development of habits of initiative, self-reliance, and leadership become definite parts of the educational aim. The progressive school of today makes it possible for pupils to learn by doing, whereas the traditional school provided comparatively few opportunities for the exercise and growth of latent powers of initiative and leadership.

To the pupils who participate in such activities as the planning of an assembly program, serving on an election committee, devising a program of work for a club, or serving as a class officer, splendid opportunities are given for the development of the qualities of initiative and leadership. But this participation does not solve the problem. What about other pupils who may have latent powers of leadership? Are all the resources of the school being utilized to give these potential leaders the kind of encouragement and training which will best serve their needs?

Heights High School is located in a suburban community and has an enrolment of approximately twenty-two hundred pupils in Grades X, XI, and XII. The orientation of the major officers of the student body into an understanding of their duties and responsibili-

ties has been successfully achieved over a period of many years with the aid of teachers skilled in the guidance of various phases of student activities. However, no systematic plan had ever been devised to provide training and guidance for the minor officers of the student body who functioned in each of the sixty-nine home rooms. With each teacher following his own plan, some of these officers took an active part in the affairs of the room; but, since little or no importance was attached to the positions, most of the officers were rather indifferent toward their duties and responsibilities. In an attempt to grapple with this situation a unique experiment was carried on during the spring of 1935. It was decided to hold the election of the home-room officers in May, instead of waiting until the autumn semester, in order that adequate preparations could be made for the development of the new plan. The steps by which this experiment was worked out are suggested in the following outline.

HOME-ROOM ELECTIONS

I. Announcements made concerning—
   1. Date of home-room elections
   2. Officers to be elected in fifty-eight home rooms (graduating rooms omitted)
      a) Student-council representative
      b) Girls' Cabinet representative
      c) Boosters' Club representative
      d) Intramural manager
      e) Black and Gold manager [school paper]
      f) Home-room captain

II. Bulletins issued to all home rooms
   1. Discussing the importance of home-room elections as a means of teaching civic responsibilities
   2. Giving suggestions concerning home-room discussions dealing with such topics as:
      a) Voting—one of the duties of adult citizenship
      b) The type of person often elected to public office
      c) The indifferent voter, the prejudiced voter, the uninformed voter, the intelligent voter
      d) The type of pupil best qualified to hold office
   3. Giving an analysis of the qualifications for, and the responsibilities of, each office to be filled

III. Election returns were sent to the office, where the results were tabulated.

A training school for the officers-elect was organized according to the plan outlined below.

I. The purpose of the training school was to explain to the officers—
   1. The duties and the responsibilities of their offices
   2. The expectations of the school and the home rooms
   3. How to co-operate with the teachers in working out constructive home-room programs
   4. The technique of conducting a discussion, of molding intelligent opinion, of developing unity and school spirit, of exerting leadership

II. Organization and plan of the training school
   1. Joint committees of teachers and pupils worked out a course of study for each of the six groups (one group for each type of officer).
   2. One general meeting of all officers, 348 in all. The program included inspirational talks, an explanation of the purpose of the plan, and announcement of the details concerning the group meetings which followed later in the week. The president of the student council presided.
   3. Group meetings were held during one week according to announced schedule. Attendance was required, and roll call was taken at the opening of each meeting.
   4. Secretaries, who were appointed in each group, took notes and made written reports to those administering the project.
   5. Instruction in group meetings was given jointly by carefully selected teachers and pupils, who followed the courses of study previously worked out.
   6. Members of each group were required to take notes and to submit a written report at the end of the week on the subject "My Job and How To Do It."

Three of the papers submitted at the end of the training period are quoted.

My Job and How To Do It

HOME-ROOM CAPTAIN

Each home room is a small society with its various types of people and its leaders. It is a place where each person who is considered a reticent person should be helped to express himself, and the too-officious person should learn to give others an opportunity. Loyalty among the members of the home room will help to make a unified and co-operative group interested in curricular activities.

The home-room captain's duties are many, but they help to make one more efficient. A program with a purpose should be established which covers the year or at least the semester. Of course, each home-room teacher has her own system which may not coincide with the one suggested. The captains should read the announcements clearly and distinctly. Each pupil should be interested enough

to remember the more important affairs. This will relieve the teacher of one more duty. A good leader is able to keep order in the home room and still not make the members subservient. It is part of the social duties of a captain to remember the ill members of her room and either appoint a pupil to take care of the remembrance or do it herself. There are often matters of school business or home-room business to be attended to. The captain should give each representative a chance to present her report without interference. The reports of the student council, the girls' cabinet, and the intramural manager deserve attention and are often important to everyone. The captain should set an example in conduct, personal appearance, dependability, and scholarship. One should accept responsibilities without too much dependence on the teacher. Committees should be selected by the captain. This gives opportunities to the reserved person. Problems should be discussed and given consideration. The home-room teacher would appreciate having the captain see that the room is left in order after each period. The keynote of the captain's work is co-operation and helping others to co-operate.

The captain should take charge and be able to keep the attention of the group during a discussion. It is often difficult to officiate without arousing antagonism. If the leader will respect each member's viewpoints, there will be no antagonistic attitude. The captain should use common sense in handling a situation that arises in the home room and, above all, co-operate with the teacher.

I appreciate fully my position, and I have made plans for my home room next year. Since it will be a Senior class, I am emphasizing a social program. I feel that our home room has not had sufficient sociability, and I hope to make the girls better acquainted. I hope that I will prove to be a successful home-room captain.

STUDENT-COUNCIL REPRESENTATIVE

My job is to act faithfully as an intermediary between the student council and my home room. I am to report the matters of business taken up at the meeting to my home room and bring back their opinions on the subject. It is vitally necessary that I should form an executive committee of the rest of the representatives from various organizations and work with them to create school spirit. A definite time for my report is to be set, and I am to talk over the report with my home-room teacher beforehand so as to receive her full co-operation. Since my home room is inclined to be indifferent, I will try to make my reports as interesting as possible so as to create enthusiasm. I will continually stress the importance of each individual in aiding to build a better school and will ask their individual opinions. In all these ways I will attempt to fill satisfactorily my post as representative for the student council.

INTRAMURAL MANAGER

I have never had the experience of being an intramural manager before, but I fully grasp the importance and responsibility of the office that I am about to fill. The chief thing that I have to accomplish is to stimulate the interest of

every possible athlete in the room so that they will come out for intramurals. I will permit each boy to pick out the position he is best suited for, and, if I think that the person is not capable to fill the position after a tryout, I will shift him to the position for which I think he is best suited. I will ask permission of the home-room teacher to have a section of the blackboard reserved for the home-room calendar. The day of the game will be announced so that the players will know where to be and at what time to come and so that other boys interested can come out and watch their team play. After each game I will write the results on the blackboard. With these plans I am confident that our room will take keen interest in the intramural program.

If the enthusiasm and the interest of the pupil officers are criteria by which to judge the value of the experiment, then the results will be clearly manifested in the ensuing year. Already the project has served (1) to give dignity and prestige to offices that were formerly regarded as unimportant, (2) to fire these pupils with the desire and the ambition to perform the duties of their offices to the best of their ability, (3) to give the pupils a feeling of confidence in their ability to meet successfully the requirements of their offices, (4) to imbue the officers-elect with enthusiasm for the activities of the school during the autumn semester, (5) to give the pupil officers the feeling that they are a definite part of the school organization, and (6) to provide a basis for better home-room and school spirit.

PUBLISHED WORKBOOKS VERSUS PUPIL-MADE NOTEBOOKS IN NINTH-GRADE GENERAL SCIENCE

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THE PROBLEM

Within the past decade the use of workbooks in the teaching of science has increased enormously. It would almost seem that workbooks will soon be employed by the large majority of teachers. Many favorable claims for the use of workbooks have been advanced by their authors and other persons, chief among which have been the following: (1) The pupils are motivated through definite, challenging, interesting assignments. (2) The time of the teacher is saved because he is relieved of the bulk of the work directly involved in developing assignments. (3) The work is better organized than it can ordinarily be organized by the busy teacher. (4) From the standpoint of their contribution to the objectives of the course, the assignments in carefully prepared workbooks are superior to typical teacher assignments; that is, the workbook assignments promote pupil learning in the right directions more economically and effectively.

Among the limitations and objections to workbooks that have been voiced are the following: (1) The workbook constitutes an additional expense to parents. (2) The workbook removes an important stimulus to teachers and hence is not conducive to professional growth. (3) Despite its alleged advantages, the workbook is less effective than a notebook constructed by the pupil under the direction of the instructor in that too much is done for the pupil and he is thereby deprived of valuable educational activity and responsibility.

EARLIER INVESTIGATIONS

Hurd[1] concluded from fifteen controlled experiments in physics that the use of work sheets does not insure superior results, that there is approximately an equal likelihood that better results are obtained by other methods, and that some teachers can obtain better results by the use of work sheets and others cannot.

Powers,[2] in an experiment involving twenty-eight pupils in ninth-grade general science, found the self-made manual slightly superior to the commercially published laboratory manual. However, the difference was not great enough, in view of the small number of cases, to be reliable, and it might have been a result of chance errors of sampling.

Moore, Dykhouse, and Curtis,[3] in a controlled study of the relative effectiveness of the conventional method and the progressive-diagram, or "motion-picture," method of reporting laboratory exercises in general science, concluded that the progressive-diagram method is superior "since it effects at least as good learning of subject matter in considerably less time."

In chemistry Stubbs[4] found that the use of a separate notebook for writing up experiments gave slightly better temporary results on written examinations than the filling-in of blanks on prepared work sheets but that the use of a loose-leaf manual gave practically the same results with less time expenditure.

EXPERIMENTAL SITUATION AND PROCEDURE IN THE PRESENT STUDY

In an effort to furnish relatively reliable and objective data to show whether the workbook or the notebook is superior for the pupil,

[1] A. W. Hurd, "The Workbook as an Instructional Aid." New York: Teachers College, Columbia University, 1930. Pp. 54 (manuscript). Summary in *School Review*, XXXIX (October, 1931), 608–16.

[2] Stuart C. Powers, "A Study of the 'Self-made' Pupil Laboratory Manual versus the Traditional Laboratory Manual." Unpublished Master's Thesis, Ohio State University, 1931.

[3] Fred W. Moore, Claude J. Dykhouse, and Francis D. Curtis, "A Study of the Relative Effectiveness of Two Methods of Reporting Laboratory Exercises in General Science," *Science Education*, XIII (May, 1929), 229–35.

[4] Morris F. Stubbs, "An Experimental Study of Methods for Recording Laboratory Notes in High School Chemistry," *School Science and Mathematics*, XXVI (March, 1926), 233–39.

an experimental investigation was conducted during 1932–33 and 1933–34 in the Drum Hill Junior High School at Peekskill, New York. Four pairs of equated sections of pupils in general science were employed in the experiment. With one section of each pair a commercially published workbook was employed. In the other section of each pair the pupils kept notebook records of their laboratory experiments and experiences, together with the key-words necessary to understand the terminology of the subject matter, additional problems and projects, and various drawings and diagrams incidental to a course of this kind. In the workbook the problem of an

TABLE I

MEAN INTELLIGENCE QUOTIENT, CHRONOLOGICAL AGE, AND INITIAL SCORE ON OBJECTIVE SCIENCE TEST OF PAIRED SECTIONS IN GENERAL SCIENCE

TEACHER OF SECTION	INTELLIGENCE QUOTIENT		AGE IN YEARS AND MONTHS		INITIAL-TEST SCORE	
	Workbook Section	Notebook Section	Workbook Section	Notebook Section	Workbook Section	Notebook Section
Teacher A.....	107	107	14-11	14-11	29	28
Teacher B.....	89	89	16-0	15-9	23	23
Teacher C.....	100	99	15-2	15-2	29	29
Teacher C (second year).....	100	101	14-8	14-9	25	24

experiment was given; the drawings of apparatus were usually supplied, though not labeled; the procedure was described; and blank spaces were left in which the pupil was to fill in his observations, computations, conclusions, and practical applications. The pupils using the "self-made workbooks" wrote out all these things in the notebooks.

From each pair of sections only the records of those pupils were studied for whom pupils of equal ability could be found in the other section of that pair. The pupils were paired on the basis of intelligence quotient (on the Otis Group Intelligence Scale, Advanced Examination), chronological age, and score made at the beginning of the year on an objective test covering the work of the year. Boys were paired with boys and girls with girls. How well the pairing was done may be judged from the data in Table I.

In 1932–33 each of three teachers taught one section as a workbook section and one section as a notebook section. The following year one of these teachers conducted the experiment with two sections. As far as could be determined, there were no significant differences in time of day, absences of pupils, rooms or equipment, distractions, or other factors which would effect differences in instructional efficiency. The sole important difference was the difference in the type of workbooks used.

TABLE II

MEAN SCORES MADE ON FOUR TESTS IN GENERAL SCIENCE BY PAIRED SECTIONS, ONE SECTION USING PUBLISHED WORKBOOK AND THE OTHER PUPIL-MADE NOTEBOOK

Section	Total of Unit Tests	First-Semester Test	Third-Quarter Test	Regents' Examination
Teacher A:				
Workbook section	345.2	75.2	55.9	79.3
Notebook section	346.8	75.0	59.8	76.7
Difference in favor of workbook section	− 1.6	0.2	− 3.9	2.6
Teacher B:				
Workbook section	227.2	58.4	42.4	58.4
Notebook section	257.7	61.6	49.5	65.3
Difference in favor of workbook section	− 30.5	− 3.2	− 7.1	− 6.9
Teacher C:				
Workbook section	340.3	71.0	44.1	64.2
Notebook section	360.3	70.6	43.6	70.7
Difference in favor of workbook section	− 20.0	0.4	0.5	− 6.5

THE EXPERIMENTAL RESULTS

The progress of the class was measured by the following means: (1) assignment tests over units of the course, (2) an objective test given at the end of the first semester, (3) an objective test given at the end of the third quarter of the school year, and (4) the New York Regents' examination in general science.

To the pair of sections employed in the experiment of the second year, the Ruch-Popenoe General Science Test was given at the beginning and again at the close of the year, and the gains were taken as measures of the growth of the pupils.

The reliability coefficients of these tests, ranging between .8 and .9, are sufficiently large for group comparisons.

The test scores of the six sections measured by the assignment tests, objective tests, and Regents' examination are shown for each group in Table II.

The gains made by the fourth pair of sections on the Ruch-Popenoe tests are shown in Table III.

TABLE III

MEAN SCORES ON RUCH-POPENOE GENERAL SCIENCE TEST MADE BY PAIRED SECTIONS, ONE USING PUBLISHED WORKBOOK AND THE OTHER PUPIL-MADE NOTEBOOK

Section	Initial Test	Final Test	Gain
Workbook section	24.8	39.1	14.3
Notebook section	23.5	34.3	10.8
Difference in favor of workbook section	1.3	4.8	3.5

Of the twelve differences shown in Table II, but two are large enough to give any great assurance that they are not attributable to chance errors. These two differences favor the notebook method. Of six other differences large enough to be indicative, five favor the notebook method. Of the two sections for which gains on the Ruch-Popenoe test were available, an indicative but not fully reliable difference favors the workbook section.

CONCLUSIONS

1. The results of this study are in general agreement with those of the other investigations cited.

2. As far as the outcomes of instruction that can be measured by written examinations are concerned, there seems to be little demonstrable difference in the relative efficiency of the workbook and of

the notebook as a device for teaching general science in Grade IX, though the results suggest the probable but slight superiority of the notebook technique.

3. One teacher may secure better results by use of workbooks and another by use of notebooks.

4. If there is any relation between the intelligence of pupils and the relative efficacy of either method, the notebook is slightly better for pupils with lower intelligence quotients and the workbook for pupils with higher intelligence quotients. Apparently, the writing and the drawing involved in making notebooks are more helpful in fixing facts for the pupils with low intelligence quotients than for the brighter pupils.

A QUANTITATIVE STUDY OF SOCIAL ATTITUDES

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Several years have passed since Thurstone first announced his method of objective measurement of social attitudes. Since that time he and his students have constructed numerous attitude scales and have investigated various phases of the methodology. The scales have been widely used in the study of social, psychological, and educational problems.

The present article reports some findings on the effect of high-school and college instruction on social attitudes and the extent of the relation between the scores on attitude scales and scores on tests of related information, of personality, and of intelligence. The following tests were used in this study: (1) the Rosander-Thurstone Scale for Measuring Attitude toward the Constitution of the United States; (2) an objective test of 150 true-false items divided equally among the origin, the structure, and the functioning of the Constitution; (3) the Thurstone Psychological Examination for High-School Graduates and College Freshmen issued by the American Council on Education; and (4) the Thurstone and Thurstone Personality Schedule.

The attitude scale, which consisted of two parallel forms, was constructed according to the usual Thurstone technique. The information test on the Constitution was carefully constructed by the writer with the aid of two professors of American government at the University of Chicago. Each item was carefully analyzed and edited, and many statements were discarded before the test was put into final form. Furthermore, preliminary testing was employed in order to discover any weaknesses that might have been overlooked. The finished test, judged by subsequent applications, was probably a fairly effective instrument. Since practically all the incoming students at the University of Chicago are required to take both the

American Council Psychological Examination and the Thurstone and Thurstone personality inventory, the scores on these tests were available for practically any Freshman or Sophomore.

The Constitution attitude scale and the Constitution information test were given during the school year 1932–33 to a total of 148 students at the University of Chicago, about half of whom were members of social-science classes in the University High School and the other half in the Freshman and Sophomore years at the University. The writer scored all the papers, tabulated all the results, and made all the computations of the numerical data.

CORRELATIONS BETWEEN ATTITUDE AND KNOWLEDGE

Every student received four scores on his specific knowledge of the Constitution: a score on each of the three parts of the test and a total or gross score. Each of these four scores was correlated with the attitude score, first for the high-school pupils, then for the college students, and finally for these two groups taken as a unit. The correlations and their probable errors are given in Table I.

In the case of the high-school group no significant correlations were found between attitude and specific knowledge. These coefficients were not only not significant, but for all practical purposes they were actually zero. This situation was found for the scores on the subtests and for the total score as well.

The correlations for the college students were generally higher, although no correlation was three times its probable error. The highest ratio between a correlation and its probable error was that between the score on attitude and the score on information about the functioning of the Constitution (2.7). Information about the Constitution's origin had the smallest correlation, actually zero, with attitude score; knowledge of structure showed the next highest correlation; and knowledge of functioning correlated the highest with attitude score. Not only do the magnitudes of the coefficients increase in the order named, but their statistical significance increases in the same order. When the total information scores of the entire group were correlated with their attitude scores, the coefficient was low but significant, being nearly eight times its probable error. These correlations suggest that a critical attitude is more closely

associated with an understanding of how the Constitution functions than with a knowledge of how it originated.

If it may be assumed that the tests used give a fair measure of the degree of understanding of the origin, the structure, and the functioning of the Constitution, then the findings indicate that an understanding of the origin of the Constitution has no relation whatever with a person's attitude toward the Constitution. The data seem

TABLE I

CORRELATIONS BETWEEN SCORES ON ATTITUDE TOWARD THE CONSTITUTION AND SCORES ON THREE TESTS OF INFORMATION ABOUT THE CONSTITUTION MADE BY 148 HIGH-SCHOOL AND COLLEGE STUDENTS

Variables Correlated	High-School Pupils*	College Students*
Attitude and information about origin of Constitution	−.043±.095	+.005±.081
Attitude and information about structure of Constitution	−.035±.095	−.138±.078
Attitude and information about functioning of Constitution	+.030±.095	−.207±.077
Attitude and total score on information tests†	+.036±.095	−.186±.078

*A plus sign before a correlation means that, the higher the information score, the less critical was the attitude toward the Constitution. A negative sign indicates the opposite tendency: those who obtained the higher scores on the information test (knew more about the Constitution) tended to be more critical of the Constitution as measured by the attitude scale.

† The correlation for all 148 subjects combined was −.222±.028.

to show that, with respect to the Constitution, there is no reason for thinking that an understanding of origins is more profound in a radical than in a conservative. This conclusion is contrary to the theory which James Harvey Robinson popularized several years ago in his lectures and articles on the new history, namely, that an understanding of how the present came to be would make a person more disposed to accept and suggest change because he would see how inadequate are the original reasons for any belief or institution in the face of present-day knowledge and conditions. Apparently, an understanding of how the institution works today is much more provocative of a critical attitude of mind than is a knowledge of origins.

RELATIONS OF ATTITUDE TO INTELLIGENCE AND PERSONALITY

Of the college students who had been tested on the attitude scale, there were fifty-three for whom records on both the intelligence and the personality tests were available. The correlation between attitude toward the Constitution and intelligence was found to be $-.128 \pm .08$, that between attitude and information was $-.186 \pm .08$, while that between attitude and personality was $-.224 \pm .08$. These data indicate a tendency for the more critical attitude to be associated with the more intelligent, the better informed, and the more neurotic persons. All these coefficients, however, were low, and of varying degrees of significance. The correlation between attitude score and neurotic level was the highest and the most significant of the three, being 2.8 times its probable error. Clearly, the personality scores of these students had a closer relation with their scores on attitude toward the Constitution than had the intelligence scores. It may be that a critical attitude is more closely associated with levels of psychoneurosis than with levels of general intelligence.

EFFECT OF COLLEGE INSTRUCTION ON ATTITUDES

The attitude scale gives an objective method of measuring the extent to which instruction changes social attitudes. Much has been asserted with regard to the desirability of changing the attitudes of students, but little objective examination of the whole field has been made. It is sometimes alleged, for example, that the personal views of teachers have tremendous influence on the attitudes of students and that the so-called "radical" teacher is turning the public schools and the colleges into hotbeds of sedition and weaning students away from the wisdom of the fathers. In this investigation some data on this point were secured.

Two college classes studying the United States Constitution were tested and, after an interval of time, were retested by means of the Constitution attitude test. In the first class the interval between the tests was only two weeks. In the second class the interval was twelve weeks, the duration of the entire course. For the students in the latter class, then, there were available measures of their attitudes before and after they had taken the course. The assumption is here made that the course was the main factor responsible for

any change in attitude. While in some individual cases this assumption may not have been justified, it seems, on the whole, a reasonable assumption.

The first group consisted of thirty-three college Freshmen and Sophomores. On the initial test they obtained a mean score of $5.39 \pm .829$. On the comparable test given two weeks later they obtained a mean score of $5.85 \pm .896$, a gain of .46 points with a probable error of about .10. That is, as a group, these students became significantly less critical of the Constitution. The standard deviations indicate a slight increase in variability. The correlation between the two sets of scores was only .543.

A more important question is how many students noticeably shifted their attitudes during this period. When .8 of a unit was considered indicative of a noticeable shift in individual attitude, it was found that two of these students became more critical, twelve became less critical, while nineteen students did not appreciably change their attitudes. In other words, most of the shift for the group resulted from the change in attitude of twelve students. An attempt was made to find out what happened to these twelve students during the two weeks, but to no avail. The professor in charge of the course, who co-operated wholeheartedly and who was himself a close student of testing and teaching, was unable to throw any light on the matter. In some cases the change amounted to as much as two full points on an eleven-point scale. The writer is inclined to believe that some, if not a great deal, of this shifting was due to the greater instability of attitude in some students than in others. Other studies made by the writer with regard to the instability of individual attitudes have unearthed pronounced shifts in the scores of some persons even from one day to the next. Still there is here no absolute proof of just what caused this unexpected change during the relatively short period of two weeks.

Both in this class and in the class retested after a twelve-week interval, the professor in charge was also tested on the attitude scale. Only two of the students in the first group were more critical than the professor himself. As a whole, the class shifted away from the professor, not toward him. This shift was not due to any reaction

against the professor, since the writer can vouch that the instruction was free from personal bias, that the professor never obtruded his personal views.

The results for the second class were more adequate because the testing was made at the beginning of the course and again at the end of the course, a period of three months intervening. The professor of this class was much more critical of the Constitution than was the professor of the first class, and he let his students know about it. Furthermore, his score showed the most critical attitude of any found. At the beginning of the course no student's score on the scale approached the professor's; at the end of three months the scores of two pupils were close to that of the professor.

At the beginning of the course the mean score of this class of thirty-eight students was 5.11, while at the end of three months it had shifted to 4.82, a distance of .29 points on an eleven-point scale. As the probable error of this difference is .08, the change is statistically significant. In this case the class as a whole became more critical of the Constitution—a result exactly the opposite of the trend in the other group.

When a shift of .8 of a point in an individual score was again considered the minimum value indicating a noticeable change in attitude, it was found that three students became less critical, eleven became more critical, while twenty-four did not change their attitudes appreciably.

Probably the most important finding is that approximately two-thirds of the members of both classes did not change their attitudes at all. Apparently, three months' study of the Constitution under a professor who is himself an outspoken critic of the document affects no more than a third of the group so far as attitudes of the type measured are concerned. That the professor did not create any great amount of over-reaction because of his own views is attested by the fact that only three students became less critical during the period.

CONCLUSION

This preliminary investigation indicates the complexity of the problems connected with social attitudes and the possibility of em-

ploying objective methods in solving these problems. Further experimentation is needed, the quality of which ought to be steadily improved by means of more refined measuring instruments.

It appears from this study that the measurable changes in attitude due to college instruction are slight, that in the majority of cases there is no appreciable change, and that the personal beliefs of the professor may not be such a dominant factor as we have been led to believe. The writer's opinion is that the effect of the usual course in government on the attitudes of students has been grossly exaggerated. The mastery of a large mass of facts about the Constitution does not mean that a person thus equipped will be more critical, or more objective, or more wise in his attitude toward this document.

Some of the data support the hypothesis that an understanding of the functioning of the Constitution is more closely related to critical attitude than is an understanding of the origins of the Constitution. Further, there is reason to believe that a relation exists between introversion and critical-mindedness, the more unstable persons tending to be slightly more critical, on the whole, than the more extroverted individuals.

These conclusions are put forth with the full realization that they are no truer than the assumptions upon which the study was based nor more valid than the measuring instruments which were employed.

SELECTED REFERENCES ON THE ORGANIZATION OF SECONDARY EDUCATION

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The following references have been selected from publications dealing with the organization of secondary education that have appeared since April 30, 1934. Publications bearing on the different types of secondary schools are, for the most part, general in nature and do not fit into particular groupings. The junior college has received more attention in the professional literature than other specific types of institutions. During the year changes in occupational conditions have received extended treatment in articles on vocational education. The articles on adult education also reflect changed social conditions.

Vertical Organization

471. Frederick, Orie I. "Secondary-School Reorganization," *Educational Administration and Supervision*, XX (September, 1934), 438–47.

A discussion of five of the six issues presented in *The Reorganization of Secondary Education* (National Survey of Secondary Education Monograph No. 5). Seven conclusions are drawn from the findings of the investigation.

472. French, Will. "A Senior School Program for Our Developing Society," *North Central Association Quarterly*, IX (April, 1935), 407–15.

A discussion of the type of organization being forced on the schools by the changing social and economic conditions, which may result in a ten-year period of secondary education.

473. Hutchins, Robert M. "Turn High Schools into Peoples Colleges," *Journal of the National Education Association*, XXIII (November, 1934), 217.

Advocates a reorganization of the educational program to provide educational training up to the age of twenty for those young persons whom industry can no longer absorb.

474. Lawson, Douglas E., Reavis, William C., and Maddox, Clifford R. "Structural Organization of the American Public School System," *School Organization*, pp. 369–81, 433–36. Review of Educational Research, Vol.

IV, No. 4. Washington: American Educational Research Association of the National Education Association, 1934.

An extensive review of the various studies bearing on the origin and the development of the American public-school system. A bibliography of sixty-six studies is given.

475. SPAULDING, FRANCIS T. "The Investigation of Vertical Reorganization," *Applying and Extending the National Survey of Secondary Education*, pp. 11–20. Bulletin of the Department of Secondary-School Principals, No. 56. Chicago: Department of Secondary-School Principals of the National Education Association (5835 Kimbark Avenue), 1935.

A discussion of the ways in which the findings in *The Reorganization of Secondary Education* (National Survey of Secondary Education Monograph No. 5) may be of service to the individual school. Proposes further questions of organization that need answering.

ARTICULATION OF SCHOOL UNITS

476. DEASY, CATHERINE M. "Articulation of Schools in Seattle," *Junior-Senior High School Clearing House*, IX (September, 1934), 57–60.

A discussion of the method and means used in Seattle in articulating the units of the educational system. The aim of the program is to adjust the schools "to the child so that he may have a continuous, uninterrupted development."

477. MILLS, HENRY C. "Duplication of Effort between High School and College," *School Review*, XLIII (May, 1935), 363–70.

A report of an investigation made at the University of Buffalo of the amount of overlapping in the content of high-school and college courses.

478. SHOFSTALL, W. P. "The Achievement of High-School and College Students in the Same Classes," *School Review*, XLIII (March, 1935), 184–88.

A report of an experiment being conducted at Stephens College, in which high-school and college students are permitted to register in the same classes. Data are presented from which the conclusion is drawn that there is no justification for the arbitrary line of demarcation between senior high school and junior college.

HORIZONTAL ORGANIZATION

479. ARTHUR, CHARLES M. "Vocational Education in 1934," *School Life*, XX (February, 1935), 138–39.

A brief summary of the vocational-education activities in rehabilitation, trades and industries, home economics, agriculture, and adjustment of adult workers. Enrolments in all schools operated under state plans for vocational education, including schools federally aided and those non-federally aided, are given for day, evening, and part-time schools.

480. BLAIR, HERBERT. "The Administration of Vocational Instruction," *Education*, LV (April, 1935), 495–500.

Contrasts the administrative procedures of public and private trade and vocational schools. Federal rehabilitation work is discussed.

481. KEFAUVER, GRAYSON N. "The Investigation of Horizontal Organization," *Applying and Extending the National Survey of Secondary Education*, pp. 6–10. Bulletin of the Department of Secondary-School Principals, No. 56. Chicago: Department of Secondary-School Principals of the National Education Association (5835 Kimbark Avenue), 1935.

Gives a statement of needed investigations in the field of horizontal organization of secondary education. Some suggestions are included on how the evidence for these investigations may be secured.

482. LEIGHTON, ARTHUR W. "Technical and Engineering Education," *Junior College Journal*, V (December, 1934), 113–19.

A discussion of the place of the junior college in relation to technical and engineering education. The curricular offerings in these fields are considered.

483. MYERS, GEORGE E. "What of Unemployed Youth?" *Education*, LV (April, 1935), 468–71.

Analyzes "the responsibilities and opportunities of the schools with respect to the unemployed youth" and recommends a four-part program.

484. PAINE, H. W. "Educational Defeatism: Utility versus Futility in Vocational Training," *Occupations*, XIII (April, 1935), 619–23.

A sane discussion of the need of organized courses in vocational education even though vocations may be shifting.

485. POWERS, H. W. "The Offering in Trade, Vocational, and Technical Schools," *School Review*, XLIII (May, 1935), 337–49.

A study of admission and graduation requirements and of curriculums and subjects offered in ninety-three public trade and vocational schools, public technical schools, and public technical high schools in twenty-three states.

486. PROCTOR, WILLIAM MARTIN. "Vocations and Avocations," *Nation's Schools*, XV (January, 1935), 16–18.

A discussion of the need of more avocational training to furnish leisure-time activities of worth-while character. Some attention is given to the need for presenting a clear understanding of the social and the economic situations as they exist.

487. SMALL, R. O. "Vocational Education: Where Are We Going and When?" *Education*, LV (April, 1935), 456–60.

An inspiring analysis of the program of vocational education as it is now developing in the United States.

488. SYLVESTER, CHARLES W. "Vocational Education's New Deal," *Industrial Arts and Vocational Education*, XXIV (February, 1935), 33–38.

A discussion of the vocational-education program in Baltimore and the adaptations made to meet the needs of the prevailing social and economic conditions.

Junior High School

489. Johnston, Edgar G. "Standards of Achievement for the Junior High School," *Junior-Senior High School Clearing House*, IX (December, 1934), 215–18.

A discussion of standards of achievement in terms of goals; of individual needs, interests, and abilities; and of symmetrical development of well-rounded personalities.

490. McClellan, H. N. "The Origin of the Junior High School," *California Journal of Secondary Education*, X (February, 1935), 165–70.

A review of the various committee reports that led up to the establishment of junior high schools. The origin of the junior high school in Berkeley in 1909 is described.

491. Nolan, Walter C. "Curriculum Reorganization in the Junior High Schools of San Francisco," *Junior-Senior High School Clearing House*, IX (February, 1935), 356–59.

A description of the administrative and committee organization used in the revision of the junior high school curriculum, with some discussion of the aims and content of the courses and of the distribution of electives.

492. Patry, Frederick L. "Mental Hygiene in the Junior High School," *Junior-Senior High School Clearing House*, IX (December, 1934), 245–50.

A discussion of the contributions, opportunities, and methods of the junior high school in promoting mental health among its pupils.

493. Salisbury, Rachel. "Integration and Transfer in the Junior High School," *Junior-Senior High School Clearing House*, IX (March, 1935), 423–27.

Presents the argument that the integrated curriculum demands teaching designed to aid in the transfer of training. Results of some experiments are given to substantiate the argument.

494. Unzicker, Samuel P. "Traits of Junior-High-School Pupils," *Junior-Senior High School Clearing House*, IX (September, 1934), 40–45.

A report of a study in which parents, teachers, and pupils ranked 115 traits or qualities which junior high school pupils should hold before themselves as ideals of conduct. The ratings assigned by the three different groups are compared.

Junior College

495. Bird, Grace V. "Junior College Problems in 1934–35," *Junior College Journal*, V (January, 1935), 170–76.

Discusses the means by which the junior college can provide the student with methods of response to his rising consciousness of his need for self-realization that will be satisfactory to him and at the same time sustain and enhance the welfare of the social group.

496. Carpenter, W. W. "Problems in Junior College Education," *Junior College Journal*, V (October, 1934), 13–15.

A list of unsolved problems secured from the chief executive of each of the 513 junior colleges listed in the 1934 Junior College Directory. The problems are classified under 22 headings.

497. EELLS, WALTER CROSBY. "Inauguration of Rosco Chandler Ingalls: Address on Behalf of American Association of Junior Colleges," *Junior College Journal*, V (February, 1935), 228–31.

A tribute to the work of the retiring director, William Henry Snyder, and the Los Angeles Junior College in preparing students for semi-professional occupations.

498. EELLS, WALTER CROSBY. "Status of the Junior College in the United States, 1934–35," *School and Society*, XLI (February 9, 1935), 204–7.

Gives information with regard to the number of junior colleges by states and the total enrolments and information on organization and instructors.

499. ENGEL, E. F. "The Junior College in Kansas, 1919–1934," *Junior College Journal*, V (October, 1934), 3–9.

Discusses the origin, growth, number, and success of junior-college students transferred to senior colleges. The enrolment of the junior colleges in Kansas is given, and the future development of the junior college is discussed briefly.

500. EURICH, ALVIN C. "The New Education in Action in Colleges and Universities," *California Journal of Secondary Education*, X (October, 1934), 43–46.

A discussion of the new methods and procedures by which some colleges are attempting to fit their work to the students. The methods in use in the lower division of the University of Minnesota are described.

501. MORTON, OHLAND. "Municipal Junior Colleges in Oklahoma," *Junior College Journal*, V (December, 1934), 124–28.

Gives the sizes and the locations of the junior colleges in Oklahoma and some discussion of the social forces aiding their growth.

502. PEIK, W. E. "The Place of the Junior College in American Education," *Proceedings of the National Education Association*, LXXII (1934), 231–32.

Recommends that the junior college be more closely articulated with the secondary school and that it prepare more effectively for scholarly initiative and attainment at the senior-college level than it now does.

503. RICCIARDI, NICHOLAS. "What May Be Expected of the Junior College?" *Junior College Journal*, V (October, 1934), 10–12.

An analysis of the responsibility of the junior college for orienting the student to society so that he will be an intelligent participant and not a bewildered spectator.

504. STAFFELBACH, ELMER H. "Junior College Education in California," *Sierra Educational News*, XXX (December, 1934), 17–28.

A comprehensive study of the junior-college situation in California, in which forty-four questions relating to various phases of the junior college are discussed.

505. WAHLQUIST, JOHN T. "State Junior Colleges of Utah," *Junior College Journal*, V (November, 1934), 77–84.

A discussion of the co-operation of the Mormon church and the state of Utah in the support of the junior colleges. Also discusses enrolment, tuition and fees, faculty salaries, problems of administration, and services rendered by the junior colleges.

506. WRENN, C. GILBERT. "Adjustment of Junior College Transfers," *Junior College Journal*, V (March, 1935), 281–85.

Reports the findings of studies made at Stanford University concerning the problems of adjustment which junior-college students meet on transferring to a university.

507. ZOOK, GEORGE F. "Junior College: Dependent or Independent?" *Junior College Journal*, V (May, 1935), 432–36.

Stresses the interdependence of all educational institutions in the interests of the students.

THE SMALL HIGH SCHOOL

508. HAIGHT, R. C. "The Plight of the Small High School," *Progressive Education*, XII (April, 1935), 245–47.

A plea for a revision of accrediting standards that will not hamper the small high school in its attempts to turn out a high type of boy and girl who will follow some gainful occupation.

509. KOOS, LEONARD V. "The Smaller Secondary School in the National Survey of Secondary Education," *Proceedings of the National Education Association*, LXXII (1934), 445–47.

A brief statement of the purposes of making a separate study of the small secondary school in the National Survey of Secondary Education. Some conclusions and implications of the study are given.

510. SALISBURY, W. SEWARD. "An Experiment in Adjusting the Vocational Curricula of a Small Rural High School To Be Productive of the Higher Values," *Education*, LV (April, 1935), 501–5.

A discussion of the adaptation of the agricultural and the homemaking curriculums to meet the needs of a rural community in New York.

511. SKILES, JONAH W. D. "Enrichment of the Curriculum for the Small High School," *School and Society*, XLI (May 25, 1935), 707–8.

A suggestion of how the high school with three to six teachers may offer an enriched program.

512. WIGGINS, D. M. "Maladministration in Small High Schools," *Junior-Senior High School Clearing House*, IX (November, 1934), 159–62.

A discussion of maladministration in the small high school and suggestions for improvement.

The Six-Year High School

513. Kilzer, L. R. "Types of Six-Year High Schools," *American School Board Journal*, LXXXIX (December, 1934), 21.

A discussion of the characteristics of three types of high schools incorporating junior high school reorganization.

514. Kilzer, L. R. "Choosing among the Three Types of Six-Year High Schools," *American School Board Journal*, XC (February, 1935), 18.

An analysis of the prevailing type of high school in relation to the school enrolment.

Adult Education

515. Bryson, Lyman. "The Relation of Adult Education to the Public School Program," *Official Report of the Department of Superintendence, 1935*, pp. 254–57. Washington: Department of Superintendence of the National Education Association, 1935.

A discussion of a five-phase program of adult education that should be conducted by the public schools.

516. Moyer, James A. "Report of National Commission on Enrichment of Adult Life," *Proceedings of the National Education Association*, LXXII (1934), 219–26.

A discussion of the program of adult education carried on under the Federal Emergency Relief Administration. Only minor mention is made of the school's part in the program.

517. Rossell, Beatrice Sawyer. "The Place of Libraries in a Community Program of Education," *Junior-Senior High School Clearing House*, IX (March, 1935), 410–13.

Discusses the work which the public libraries are doing in various cities in furthering the educational program of the community, particularly the education of adults.

518. Shear, S. Alexander. "High-School Pioneering in Adult Education," *Journal of the National Education Association*, XXIV (February, 1935), 49–51.

An account of the work being done by the Institute for Adult Education at De Witt Clinton High School in New York City. The aims, courses offered, finances, and organization of the adult program are discussed.

Educational Writings

REVIEWS AND BOOK NOTES

History of educational ideas.—It is frequently stated that, as is the teacher, so is the school. However true this statement may have been of a simple school system, the influence of outstanding educators at present obviously reaches beyond their personal contact with students. It seems timely, therefore, during a period of re-examination of our civilization, and of the schools in particular, that an analysis of the social philosophy of American educators should appear.[1]

The book is essentially a sociological history of educational ideas. The author analyzes these ideas through a study of prominent educators, who usually reflect—often unconsciously—the dominant social thought of the time but who also leave personal imprints on educational trends. Brief attention is given in chapter i, "Colonial Survivals and Revolutionary Promises," to such early educators as Franklin, Jefferson, and Webster. The next chapter, "New Conflicts and a New Solution," surveys the educational significance of social and political developments during the first half of the nineteenth century. A chapter is devoted to Horace Mann and his essentially democratic program of social and educational reform and another chapter to Henry Barnard and his program for professional improvement within a social *status quo*. The chapter on "The Education of Women" is organized around leading women educators, such as Mary Lyon, Emma Hart Willard, Catharine Beecher, Mother Mary Aloysia Hardey, Frances Wright, and Mother Elizabeth Seton, and the handicaps of finance and prejudice under which they labored. A brief summary of the five chapters completes Part I.

The remaining eleven of the sixteen chapters appear in Part II. A chapter of fifty-eight pages devoted to "The School and the Triumph of Business Enterprise, 1860–1914" indicates the rôle that the school has played in a business-dominated society, in which school expansion has been accompanied by great emphasis on school costs as an investment in training efficient workers and docile voters. Two short chapters are devoted to education in the South: one primarily to white education, focusing on the efforts of such persons as Calvin Wiley, Jabez Lamar Monroe Curry, W. H. Page, Robert Ogden, and Seaman Knapp to

[1] Merle Curti, *The Social Ideas of American Educators*. Report of the Commission on the Social Studies of the American Historical Association, Part X. New York: Charles Scribner's Sons, 1935. Pp. xxii+614. $3.00.

raise the level of education and of civilization in the South, and the other to negro education as represented by Booker T. Washington's emphasis on vocational rather than liberal education for negroes, which resulted in some sympathy among southern whites for negro education. Chapter ix is devoted to William T. Harris, his social conservatism, and his Hegelian emphasis on improving society through attention to individual rather than group activity. Catholic education, as symbolized by Bishop Spalding, is the subject of one chapter. The democratic spirit and influence of Francis Wayland Parker is evaluated in chapter xi. A chapter each is devoted to G. Stanley Hall (evolutionist), William James (individualist), and Edward Lee Thorndike (scientist). The work of each, says Curti, stresses individualism. Biological evolution stresses individualism by maintaining that what exists is a natural stage in developing what comes later, as determined by the germ plasm rather than by post-conceptual influence. Thus, the influences of education and of environment are minimized. The same general conclusions follow from James's emphasis on instincts and on the permanence of childhood habits. James's idea is that social progress results from the effort of highly galvanized individuals rather than from co-operative groups. Thorndike, as a student of James, has modified somewhat his teacher's theory of instincts, has given much attention to mental measurement, and has worked out a theory of innate individual differences, all of which, Curti suggests, point to a philosophy of individualism with selection in education and with higher education for the élite. The chapter on John Dewey characterizes him as the most comprehensive and thoroughly democratic educator considered, not only in pedagogy, but also in analysis of social ills and in combat of vested interest. Dewey has shown, earlier and more clearly than most educators, that intellectual, educational, or cultural democracy is impossible without economic democracy. The final chapter on "Post-War Patterns" gives attention to such educators as Judd, Cubberley, Kilpatrick, Counts, Rugg, and Snedden and considers the possibilities of the school as a formative and directive agency in society. Ten pages of conclusions complete Part II.

Curti considers the early social and economic background of educators as a basis for evaluating their points of view. The poor economic conditions which dominated the early lives of Mann, Parker, and Dewey and the well-to-do lives of Barnard and Harris and the opulence of James appear definitely reflected in the attitudes of social and cultural democracy of the two groups. Perhaps, too, the biological interests of Hall, James, and Thorndike have led them to an individualistic emphasis in education, whereas the socio-philosophical interest of Dewey has led him to a group approach to educational problems. Curti has, however, been objective in considering the different educators from the point of view of their *social* ideas. He has canvassed a wide scope of educational, historical, and sociological literature; has extensively documented his statements; and, in the main, has written his report in an easy diction. The reviewer feels that the book is decidedly worth while for students of education interested in the

social and economic factors underlying the development of the American school system. The book should also stimulate practical educators in the field to a useful re-evaluation of the descriptive type of history of education, which they may have encountered in earlier student days.

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Professionalizing the Catholic high school principalship.—The number of studies in educational literature dealing with private secondary schools is limited, and those that have been reported contain little information about Catholic high schools in different sections of the country. The reason is that data on the Catholic school system are not always available. A recent book[1] gives a comprehensive view not only of the experience, training, and professional preparation of the Catholic high school principal but also of the administration, the control, and the administrative problems of the Catholic school system.

The study is based largely on data furnished by 243 principals of Catholic high schools of various sizes in different sections of the country. In the first chapter the author reviews the growth of the Catholic high schools; classifies the schools as parochial, community, or central, depending on whether they are under parish, religious-order, or diocesan control, respectively; and gives as the paramount aim of the Catholic school the providing of religious training. The second chapter deals with the age, the sex, and the salaries of principals and presents the need for more adequate salaries. The data in chapters iii and iv show that, while the academic and the professional training of principals in higher institutions is, on the whole, adequate, some of it is in-service training—a fact which indicates a lack of continuity in preparation. Next, the author concludes that the experience and the stability of the Catholic high school principal are satisfactory, the median number of years of service as a principal being 5.6 and as a teacher, 9.6. Chapters vi and vii deal with administration and supervision, and the data show that the same conditions exist in Catholic schools as in other secondary schools generally: too much teaching and clerical work are required, and the classroom supervision is often lacking or is inspectorial rather than creative and inspirational. In chapter viii the author, in dealing with the principal's responsibilities, explains with insight and understanding the very complex pattern of multiple control of the Catholic high schools. The scattering of responsibility weakens the authority of the principal, who often only bears the title. Chapter x contains suggestions from principals regarding their problems and status. Chapter xi consists in a comparison of Catholic and public high school principals based on the findings of the author and those of Leonard V. Koos in *The High-School Principal* (Boston: Houghton Mifflin Company,

[1] Francis M. Crowley, *The Catholic High School Principal:* His Training, Experience, and Responsibilities. Milwaukee, Wisconsin: Bruce Publishing Co., 1935. Pp. xxvi+254. $2.50.

1924) and of Dan Harrison Eikenberry in the *Status of the High School Principal* (United States Bureau of Education Bulletin Number 24, 1925). In the final chapter the author summarizes his findings, gives recommendations for professionalizing the Catholic high school principalship, and suggests a training program for prospective principals.

The author sets forth clearly, frankly, and objectively the present status of the Catholic high school principal and indicates what he ought to be administratively. The data are based on present practice. On the whole, the study is an analytical, constructive, and functional treatment of the duties of the principal.

As the first comprehensive study of the Catholic high school principal, the book should be of interest to students of secondary education in general. It should prove a wholesome stimulus and check list for present and future incumbents of the principalship. Moreover, it can serve as a guide to those whose duty it is, in the Catholic system, to outline a course of training for prospective heads of high schools. If it succeeds in aiding the principal, the pastor, the religious superior, and the diocesan superintendent in recognizing the proper limitations of their respective responsibilities in the Catholic system, it will be of great benefit to the administration of Catholic schools.

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Social orientation for the high-school pupil.—During this period of revolutionary thinking in the social studies, one is confronted constantly with the problem of what to teach and how. "Social studies" is such an inclusive term that to determine the limits of its scope is difficult. It is sometimes remarked that anything included in the curriculum which no one can readily name is now labeled "social studies."

This characterization is quite true of the volume edited by William McAndrew,[1] which contains seventeen chapters, each written by an expert in his particular field. The book is adapted primarily, I should say, to home-room discussions, where the more general phases of high-school work can be examined.

Each chapter is arranged for teaching purposes. A short biographical sketch is given of the author, followed by a list of points to be mastered. The time to be allowed for mastery of the chapter is given, and hints are made for the treatment of the material in the chapter. At the end of each chapter a series of exercises is set up which call for activities or exercises in thinking and problem-solving. Most of the chapters conclude with a collection of pertinent quotations from prominent thinkers in all walks of life.

Altogether, the volume is delightful, with a new approach to old material and an analysis and emphasis on citizenship in a new social order which is worthy of consideration, if not by teachers of social studies in the classroom, at least by

[1] *Social Studies:* An Orientation Handbook for High-School Pupils. Edited by William McAndrew. Boston: Little, Brown & Co., 1935. Pp. viii+466. $1.60.

home-room teachers, who are sometimes perplexed to know what of a general nature to introduce into a home-room program.

The first four chapters contain material on the history of the high school, its purpose in education, and what students can make a high school do for them and their community. This material is commonplace, but perhaps it is well that young people should know more than they now do of their educational inheritance in order to appreciate what they accept all too readily as a gift from the gods.

The next six chapters deal with the individual and his personal place in the educational scheme. These discussions are not only elementary but elemental for high-school boys and girls. Julius Boraas has an excellent chapter on "You and the Art of Thinking," a subject which cannot be overstressed. If young citizens could be taught to evaluate and to judge, they would be less subject to propaganda and less likely to be classed as "easy marks" for any high-powered salesman of whatever mission. Systematic habits are discussed in a forceful way to show young people the need for organization, for concentration on learning how to study and to read, and to explain to them how to balance a schedule of work and play which may lead to mastery and success.

Elsie M. Smithies presents an intimate chat with adolescents on bodily beauty and personal charm. A little soap and makeup may go a long way to establish permanent friendships and happiness. A well-dressed person, with spotless linen, good posture, comfortable clothing, and a pleasantly modulated voice, has every reason to hope for success.

The chapters on "You and Your Clubs," "Your Home and Your Crowd," and "You and Your Leisure" are not unusual, but it probably is well for each of us to take stock occasionally of his everyday surroundings.

The editor of the book sets out at the beginning the key theme: "Politics ought to be a main concern of high school" (p. 4), but he waits until the last 175 pages for a discussion of this theme. However, it is significant of the times that a book of this type should give any space at all to an analysis of the duties and the rights of citizens or should emphasize the necessity for conscious, practical training in the affairs of the community and the state. The good of the social order is strongly urged. Graft and machine control are exposed, and an explanation is given of how an ordinary citizen is a prey to all sorts of exploiting agencies.

From a social-studies standpoint the chapter on politics, by Richard Welling, is the most important in the book. Welling suggests that the old civics was a lesson in anatomy but that the new civics consists of lessons in how to care for the body—"political hygiene," as it were.

The following quotations show the trend in the last valuable pages.

> The noblest motive is the public good [p. 379].
> Make a firsthand investigation of your town or city government [p. 385].
> Don't wait until you can vote before serving your community [p. 385].

Make your community beautiful; make its life friendly, wholesome, tolerant; make its government honest, efficient, public spirited, and you will do your share in remaking your state, your nation, and the world [p. 393].

It is a hopeful sign that writers of textbooks are urging active, practical, everyday knowledge and participation in public affairs. If democracy is to function, there is no other way.

The chapter on sex is unusual, but timely, and deals frankly and simply with a question too often avoided in dealing with young people.

The volume concludes with a chapter from Mrs. Roosevelt on "American Ideals," which ends with this benediction: "May the youth now in our high schools face the questions of the day with intelligence, honesty, and courage and may the original conception of life, liberty, and the pursuit of happiness be forever dominant in this country of ours" (p. 452).

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Interesting textbooks in geometry.—During the past fifteen years teachers of high-school mathematics have witnessed many changes in the content and the organization of material found in textbooks. After a brief period of experimentation, during which there was vast disagreement among the authors concerning the content of various courses, the books began again to assume some semblance of uniformity and agreement. However, two recent textbooks in the field of plane geometry illustrate the present stage in this development and emphasize the fact that divergent types of courses are still being formed.

The book by Wells and Hart,[1] whose names have become familiar as writers of textbooks in mathematics over a period of years, incorporates many of the desirable features for which teachers have come to look in examining new textbooks. The main part of the book is divided into the five traditional books, preceded by an introductory chapter designed to arouse the interest of the pupil and to lay a foundation of concepts and skills by means of exercises in drawing, measuring, and thinking. The notion of logical proof is carefully developed, and opportunity for its use is furnished in many simple exercises. Provision for individual differences is made by the inclusion of optional topics and an abundance of exercises graded for difficulty. Forty-seven pages of additional exercises are placed in the back of the book and arranged for use with the main portion of the text. Exercises for the pupils who can do more than the minimum are marked with "Y," and those for pupils who can do much more are marked with "X." The theorems given conform to the recommendations of the National Committee on Mathematical Requirements and the College Entrance Examination Board. Formal demonstrations are increasingly incomplete. A brief plan of proof is stated before the proof of a proposition is given. The analytic method

[1] Webster Wells and Walter W. Hart, *Progressive Plane Geometry*. Boston: D. C. Heath & Co., 1935. Pp. x+390. $1.36.

of proof is encouraged and is frequently illustrated with exercises. Mastery tests are interspersed throughout the book, and several additional tests are given in the back. Some space is devoted to the trigonometric ratios and applications. Lists of symbols, of abbreviations, and of formulas, a table of squares and square roots, and a four-place table of trigonometric ratios are included. Excellent illustrations and drawings help to make the book attractive and interesting.

The book by Blackhurst[1] is a second experimental edition and offers great contrast to the book by Wells and Hart. Blackhurst states in the Preface that one improves the processes of thinking, not by merely thinking about something, but while studying the ways in which effective thinking is done. The book illustrates his method of using geometry to serve this purpose as well as to impart the few facts of geometry being taught. He considers the placing of several pages of definitions and drawings previous to the study of the subject unnecessary and destructive of initial interest. The book opens with an inductive development of the proposition that vertical angles are equal. The deductive proof then follows. Emphasis is placed on the distinction between induction and deduction as methods of proof. Discussions of the thinking processes as they are exposed form an important part and are interwoven throughout the book. Historical information is treated similarly. In the discussions transfer is made to a consideration of thinking in connection with the affairs of everyday life by the introduction of some formal logic and the translation of a few propositions into the equivalent syllogistic expressions of the thought-process.

The book is not divided into chapters. Tests are included at intervals. Seventy-one theorems and construction problems form the principal subject matter. A few additional theorems are given in the back of the book. The proofs are arranged in sentence form and are increasingly incomplete. Although a few exercises are given with most of the theorems, their number is meager compared to the number in the book by Wells and Hart. No illustrations are included except a map and the diagrams used in the proofs. Intuition and induction play an important part in the first portion of the book, as opposed to a rigorous logical development.

An evaluation of these textbooks depends somewhat on the successful use in the classroom of materials similarly organized. Wells and Hart recognize the discussions among teachers concerning the fusion of plane and solid geometry and concerning the introduction of non-mathematical problems into geometry as an aid to transfer of training. In the back of their book they devote a few pages to each of the topics for the benefit of those teachers who wish to use them. However, on the whole, the content and the organization follow conventional practices, and the book is likely to be accepted favorably by teachers. The book by

[1] J. Herbert Blackhurst, *Humanized Geometry:* An Introduction to Thinking. Des Moines, Iowa: J. Herbert Blackhurst (Drake University), 1934 (second experimental edition). Pp. 206. $1.00.

Blackhurst has yet to stand this test of use and time. The author states that the material has been used successfully in high-school classes during the past five years. His attack on the problem of developing in the pupil an understanding of logical reasoning and the ability to use it in mathematical and non-mathematical situations is interesting and commendable. However, one wonders whether he has not unnecessarily discarded much of the material which has proved desirable. Unless pupils are familiar with plane figures and geometric concepts and relationships from their experiences in other courses, they usually find the first part of geometry difficult. The only provision for surmounting this difficulty is the inductive development. Illustrations and an abundance of exercises and applications seem desirable in a textbook in geometry. Finally, one desirable feature is lacking in both books, namely, the frequent occurrence of algebraic exercises requiring the use of geometric principles and at the same time maintaining some of the algebraic skills previously developed.

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CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

BRISCOE, ALONZO OTIS. *The Size of the Local Unit for Administration and Supervision of Public Schools.* Teachers College Contributions to Education, No. 649. New York: Teachers College, Columbia University, 1935. Pp. xiv+110. $1.50.

BUSWELL, GUY THOMAS. *How People Look at Pictures:* A Study of the Psychology of Perception in Art. Chicago: University of Chicago Press, 1935. Pp. xvi+198. $3.00.

DOYLE, SISTER MARY PETER. *A Study of Play Selection in Women's Colleges.* Teachers College Contributions to Education, No. 648. New York: Teachers College, Columbia University, 1935. Pp. vi+76. $1.50.

ELLIFF, MARY. *Some Relationships between Supply and Demand for Newly Trained Teachers:* A Survey of the Situation in a Selected Representative State, Missouri. Teachers College Contributions to Education, No. 654. New York: Teachers College, Columbia University, 1935. Pp. 70. $1.50.

FITZ-SIMMONS, MARIAN J. *Some Parent-Child Relationships:* As Shown in Clinical Case Studies. Teachers College Contributions to Education, No. 643. New York: Teachers College, Columbia University, 1935. Pp. xii+162. $1.75.

HERRINGTON, EVELYN M. *Homemaking:* An Integrated Teaching Program. New York: D. Appleton-Century Co., Inc., 1935. Pp. xii+206. $2.00.

LANCELOT, WILLIAM H., BARR, ARVIL S., TORGERSON, THEODORE L., JOHNSON, CARL E., LYON, VERGIL E., WALVOORD, ANTHONY C., and BETTS, GILBERT

LEE. *The Measurement of Teaching Efficiency.* New York: Macmillan Co., 1935. Pp. xxiv+238. $2.25.

MYERS, THEODORE R. *Intra-Family Relationships and Pupil Adjustment:* The Relation between Certain Selected Factors of the Home Environment of Junior-Senior High School Pupils and the Adjustment and Behavior of These Pupils in School. Teachers College Contributions to Education, No. 651. New York: Teachers College, Columbia University, 1935. Pp. vi+116. $1.50.

O'DELL, DE FOREST. *The History of Journalism Education in the United States.* Teachers College Contributions to Education, No. 653. New York: Teachers College, Columbia University, 1935. Pp. viii+116. $1.50.

OTTO, HENRY J. *Promotion Policies and Practices in Elementary Schools.* Educational Monographs, No. 5. Minneapolis, Minnesota: Educational Test Bureau, Inc., 1935. Pp. xii+172.

PENNELL, MARY E., and CUSACK, ALICE M. *The Teaching of Reading for Better Living.* Boston: Houghton Mifflin Co., 1935. Pp. 470. $2.00.

SIMPSON, MARGARETE. *Parent Preferences of Young Children.* Teachers College Contributions to Education, No. 652. New York: Teachers College, Columbia University, 1935. Pp. viii+86. $1.50.

THE STAFF OF THE LINCOLN SCHOOL. *Lincoln School Studies Society:* A Study Outline for School Staff Meetings. Lincoln School Research Studies. New York: Lincoln School of Teachers College, Columbia University, 1935. Pp. vi+82.

STREBEL, RALPH F. *The Nature of the Supervision of Student-Teaching in Universities Using Co-operating Public High Schools:* And Some Conditioning Factors. Teachers College Contributions to Education, No. 655. New York: Teachers College, Columbia University, 1935. Pp. vi+156. $1.75.

SYMONDS, PERCIVAL M., in collaboration with CLAUDE E. JACKSON. *Measurement of the Personality Adjustments of High School Pupils.* New York: Teachers College, Columbia University, 1935. Pp. xii+110.

WADE, J. THOMAS. *A Measurement of the Secondary School as a Part of the Pupil's Environment.* Teachers College Contributions to Education, No. 647. New York: Teachers College, Columbia University, 1935. Pp. vi+68. $1.50.

WATSON, ALICE E. *Experimental Studies in the Psychology and Pedagogy of Spelling.* Teachers College Contributions to Education, No. 638. New York: Teachers College, Columbia University, 1935. Pp. xii+144. $1.50.

WOODRING, MAXIE NAVE, and FLEMMING, CECILE WHITE. *Directing Study of High School Pupils.* New York: Teachers College, Columbia University, 1935 (revised). Pp. vi+254.

BOOKS PRIMARILY FOR HIGH-SCHOOL TEACHERS AND PUPILS

AHLES, INEZ M., and LAWLOR, MARY. *Steps to Good English,* Seventh Grade. Syracuse, New York: Iroquois Publishing Co., Inc., 1935. Pp. vi+248. $0.76.

ALLEN, IRA M., PALMER, SADIE J., and SMITH, ROSS H. *A Guidebook in United States History*, pp. iv+100, $0.40; *Teacher's Manual*, pp. iv+36, $0.20. New York: Macmillan Co., 1935.

BELL, ENID. *Tin-Craft as a Hobby*. New York: Harper & Bros., 1935. Pp. viii+112. $2.00.

BISHOP, MILDRED C., and ROBINSON, EDWARD K. *Map Exercises, Syllabus, and Notebook in American History*. Boston: Ginn & Co., 1935 (revised). Pp. 64. $0.56.

BLACKHURST, J. HERBERT. *Humanized Geometry:* An Introduction to Thinking. Des Moines, Iowa: University Press, 1935. Pp. 272.

BOVÉE, ARTHUR GIBBON, and CARNAHAN, DAVID HOBART. *New French Review Grammar and Composition Book:* With Everyday Idiom Drill and Conversational Practice. Boston: D. C. Heath & Co., 1935. Pp. xii+222. $1.36.

BRAINARD, DUDLEY S., and ZELENY, LESLIE D. *Problems of Our Times:* Vol. III, International Issues. New York: McGraw-Hill Book Co., Inc., 1935. Pp. xviii+224. $1.04.

BROOME, EDWIN C., and ADAMS, EDWIN W. *Conduct and Citizenship*. New York: Macmillan Co., 1935 (revised). Pp. x+428. $1.20.

BUTTON, NELLE. *Creative English*. Boston: Ginn & Co., 1935. Pp. x+240. $1.00.

CANBY, HENRY SEIDEL, OPDYCKE, JOHN BAKER, GILLUM, MARGARET, and CARTER, OLIVE I. *High School English*, Book III. New York: Macmillan Co., 1935. Pp. xiv+424. $1.20.

CHARTERS, W. W., SMILEY, DEAN F., and STRANG, RUTH M. *Sex Education:* A Manual for Teachers. New York: Macmillan Co., 1935. Pp. 26. $0.20.

EATON, MERRILL T., and LOUTTIT, C. M. *A Handbook of Library Usage:* For Schools and Colleges. Educational Progress Bulletin, Vol. II, No. 1. Boston: Houghton Mifflin Co., 1935. Pp. 43. $0.20.

EGAN, GRACE SHERIDAN, EDELSON, EMANUEL M., and VEIT, BENJAMIN. *An Elementary Study of Business*. Boston: Ginn & Co., 1935. Pp. viii+464. $1.40.

Essays in Modern Thought. Collected by Thomas R. Cook. Boston: D. C. Heath & Co., 1935. Pp. x+308. $1.12.

GOLDBERG, MORRIS. *Simplified Course in French Idioms:* First Series. New York: Morris Goldberg (113 West Fifty-seventh Street), 1935. Pp. 40. $0.50.

HARRIS, RUSSIA. *A Course of Study in General Science for Junior High School*. Cedar Falls, Iowa: Holst Printing Co., 1935. Pp. 66. $1.00.

HITCHCOCK, ALFRED M. *Drill*. New York: Henry Holt & Co., 1935. Pp. vi+276. $0.96.

LENNES, N. J. *A Second Course in Algebra*. New York: Macmillan Co., 1935. Pp. x+390. $1.36.

MCLEAN, BETH BAILEY. *Good Manners*. Peoria, Illinois: Manual Arts Press, 1934. Pp. 128. $1.00.

Magazine Essays of Today. Edited by Elias Lieberman. New York: Prentice-Hall, Inc., 1935. Pp. xvi+438. $1.12.

PACKARD, LEONARD O., and SINNOTT, CHARLES P. *Nations as Neighbors.* New York: Macmillan Co., 1935 (second revised edition). Pp. xiv+674. $1.92.

PAHLOW, EDWIN W. *Man's Achievement:* II. The Age of Science and Democracy. Boston: Ginn & Co., 1935. Pp. xiv+778+xx. $1.88.

RAYNER, EDWIN. *Famous Cathedrals:* And Their Stories. New York: Grosset & Dunlap, 1935. Pp. 48. $1.00.

Reading for Background. No. 1. *Background Readings for American History:* A Bibliography for Students, Librarians, and Teachers of History, pp. 48; No. 2. *What Shall We Read Next?* A Program of Reading Sequences, compiled by Jean Carolyn Roos, pp. 32; No. 3. *Readings for French, Latin, German:* A Bibliography of Materials for Atmosphere and Background for Pupils in Foreign Language Classes, edited by Alice R. Brooks, pp. 32. New York: H. W. Wilson Co., 1935. $0.35 each.

ROBBINS, CHARLES L., in collaboration with ELMER GREENE. *School History of the American People.* Yonkers-on-Hudson, New York: World Book Co., 1935 (revised). Pp. xxvi+612. $1.60

SCHULTZE, ARTHUR; SEVENOAK, FRANK L.; and STONE, LIMOND C. *Plane Geometry.* New York: Macmillan Co., 1935 (revised). Pp. xii+392. $1.40.

SCOTT, HARRY FLETCHER, CARR, WILBUR LESTER, and WILKINSON, GERALD THOMAS. *Language and Its Growth:* An Introduction to the History of Language. Chicago: Scott, Foresman & Co., 1935. Pp. viii+390. $2.00.

SHIELDS, H. G., and WILSON, W. HARMON. *Business-Economic Problems.* Cincinnati, Ohio: South-Western Publishing Co., 1935. Pp. x+714. $1.84.

STOKES, C. NEWTON, and SANFORD, VERA. *First Course in Algebra.* New York: Henry Holt & Co., 1935. Pp. vi+440. $1.28.

Teachers' Lesson Unit Series, No. 86. *Banking* by Catherine A'Hearn and *Insurance* by J. L. L. Chisholm. New York: Teachers College, Columbia University, 1935. Pp. 24. $0.25.

TRESSLER, J. C., and SHELMADINE, MARGUERITE B. *Elementary English in Action:* Grade VII, pp. xii+272, $0.68; Grade VIII, pp. xiv+288, $0.72. Boston: D. C. Heath & Co., 1935.

Understanding America. Edited by William H. Cunningham. New York: Harcourt, Brace & Co., 1934. Pp. x+358. $1.00.

University Training and Vocational Outlets. Edited by C. Gilbert Wrenn. Stanford University, California: Stanford University, 1935. Pp. 74. $0.15.

PUBLICATIONS OF THE UNITED STATES OFFICE OF EDUCATION AND OTHER MATERIAL IN PAMPHLET FORM

Annual Report of the Board of Regents of the Smithsonian Institution for the Year Ending June 30, 1933. Washington: Government Printing Office, 1935. Pp. xiv+476. $0.70.

BROADY, KNUTE O., PLATT, EARL T., and MOOMEY, DEAN. *The Chester Six-Year High School.* Educational Monographs, No. 7. University of Nebraska Publication No. 111. Lincoln, Nebraska: University of Nebraska, 1935. Pp. 84. $0.50.

BRUNER, HERBERT B., and LINDEN, ARTHUR V. A Tentative Check List for Determining the Positions Held by Students on Forty Crucial World Problems. New York: Teachers College, Columbia University, 1935.

BUROS, OSCAR K. *Educational, Psychological, and Personality Tests of 1933 and 1934.* Studies in Education, No. 7. Rutgers University Bulletin, Vol. XI, No. 11. New Brunswick, New Jersey: School of Education, Rutgers University, 1935. Pp. 44. $0.50.

CAMMACK, JAMES W., JR. *Protecting Public School Funds in Kentucky.* Bulletin of the Bureau of School Service, Vol. VII, No. 4. Lexington, Kentucky: University of Kentucky, 1935. Pp. 216. $0.50.

CUNLIFFE, REX B. *Trends in Vocational Guidance.* Studies in Education, No. 8. Rutgers University Bulletin, Vol. XII, No. 1. New Brunswick, New Jersey: School of Education, Rutgers University, 1935 (revised). Pp. 52. $0.30.

Education and the Exceptional Child: Proceedings of the Spring Conference of the Child Research Clinic of the Woods Schools. Langhorne, Pennsylvania: Child Research Clinic of the Woods Schools, 1935. Pp. 60.

ENGELHARDT, N. L., REEVES, CHARLES E., and WEST, PARL. *Survey Data Book and Standards for Operation and Maintenance of Physical Plant in Colleges and Universities.* New York: Teachers College, Columbia University, 1935. Pp. iv+148 (mimeographed).

EWALD, HAROLD HUGO. *A Handbook of Facts concerning Kansas Public Schools.* Studies in Education Numbers (Ninth of the Series). Bulletin of Information, Vol. XIV, No. 11. Emporia, Kansas: Kansas State Teachers College of Emporia, 1934. Pp. 48.

Guidance in the Secondary School: Report of a Subcommittee of the Committee on Secondary School Problems of the Associated Academic Principals. Educational Monograph of the New York State Teachers Association, No. 3. Albany, New York: New York State Teachers Association (152 Washington Avenue), 1935. Pp. viii+60. $0.25.

1000 Books for the Senior High School Library. Compiled by a Joint Committee of the American Library Association, National Education Association, and National Council of Teachers of English. Chicago: American Library Association, 1935. Pp. 96. $1.00.

Proceedings of Panel Discussion: Los Angeles Kindergarten Club. Los Angeles, California: Los Angeles Kindergarten Club (300 Trinity Auditorium), 1935. Pp. 78. $0.54.

Recent issues of the Office of Education:

Bulletin No. 15, 1933—*Federal Co-operation in Agricultural Extension Work, Vocational Education, and Vocational Rehabilitation* by Lloyd E. Blauch. Pp. xii+298.

Bulletin No. 20, 1934—*Graduate Study in Universities and Colleges in the United States* by Walton C. John. Pp. xiv+234.

SCRUGGS, SHERMAN D. *Effect of Improvement in Reading upon the Intelligence of Negro Children:* Abstract of Doctoral Dissertation. University of Kansas Bulletin of Education, Special Issue. Lawrence, Kansas: University of Kansas, 1935. Pp. 30.

SMITH, ENID SEVERY. *A Study of Twenty-five Adolescent Unmarried Mothers in New York City.* New York: Salvation Army Women's Home and Hospital (314 East Fifteenth Street), 1935. Pp. 98. $2.00.

SMITH, HENRY LESTER, MCELHINNEY, ROBERT STEWART, and STEELE, GEORGE RENWICK. *A Brief Survey of Present-Day Religious and Moral Education in the Schools of Countries Other than the United States of America.* Bulletin of the School of Education, Indiana University, Vol. XI, No. 3. Bloomington, Indiana: Bureau of Co-operative Research, Indiana University School of Education, 1935. Pp. 186. $0.50.

"Teacher Retirement Legislation in 1934 and 1935 to Date." Committee on Retirement Allowances of the National Education Association. Washington: National Education Association, 1935. Pp. 16 (mimeographed).

Teacher Tenure Legislation in 1935 to Date. Committee on Tenure for Teachers of the National Education Association. Washington: National Education Association, 1935. Pp. 38.

WOOD, THOMAS D., and LERRIGO, MARION OLIVE. *The Healthy Personality.* A Preprint of Chapter I, from Book II of "Teaching How To Live Well." Bloomington, Illinois: Public School Publishing Co., 1935. Pp. 40. $0.30.

MISCELLANEOUS PUBLICATIONS

BURKHART, ROY A. *Guiding Individual Growth:* A Discussion of Personal Counseling in Religious Education. New York: Abingdon Press, 1935. Pp. 206. $1.25.

JOECKEL, CARLETON BRUNS. *The Government of the American Public Library.* Chicago: University of Chicago Press, 1935. Pp. xx+394. $3.00.

PENDRY, ELIZABETH R., and HARTSHORNE, HUGH. *Organizations for Youth:* Leisure Time and Character-building Procedures. New York: McGraw-Hill Book Co., Inc., 1935. Pp. xii+360. $2.75.